



# Comprehensive Walkway Study 2008

## Final Report

Prepared for  
**City of Renton**



Prepared by  
**Mirai Transportation  
Planning & Engineering**



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March 2008



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Prepared for:

**City of Renton**  
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## **PREFACE**

The City of Renton includes a Walkway Program in the annual Six-Year Transportation Improvement Program (TIP). The TIP is adopted annually by the City Council.

The City entered into a Professional Services Agreement with Mirai Transportation Planning and Engineering on February 16, 2007 to conduct this study. The Planning/Building/Public Works Department administered the contract through its Transportation Systems Division. The study updates the system inventory to identify priority walkway projects eligible for funding under the City's annual Walkway Program.



## Chapter 1

# INTRODUCTION

Sidewalks and walkways in the street right of way have long been a priority for the City of Renton. The Comprehensive Plan and City Street Standards require sidewalks be constructed on all new arterial and neighborhood streets. The Subdivision Ordinance requires that frontage improvements be tied in with new subdivisions at the time they are developed.

Nevertheless, many arterial and local streets were constructed in Renton prior to the current standards. Many streets lack sidewalks on either one or both sides. Additionally, recent annexations have incorporated new neighborhoods into the city that were developed under King County development standards. The newer neighborhoods have sidewalks per current King County Road Standards, but older neighborhoods may have been developed without sidewalks under older King County Road Standards.

Sidewalk needs were last addressed in *City of Renton – Comprehensive Citywide Walkway Study* (May 8, 2003). A prioritized list of 51 projects with an estimated cost of approximately \$3,000,000 in 2003 dollars was prepared. Many of these sidewalk projects have been constructed through the Walkway Program or other funding sources.

A prior report, *City of Renton Comprehensive Walk Program, Preliminary Engineering Report*, (January 10, 1992), was prepared to identify and prioritize areas throughout the City that were in need of walkway improvements at that time. The recommendations of that report have been incorporated into the Comprehensive Plan and other City ordinances. Many of the high priority projects have been constructed.

The current *Six-Year Transportation Improvement Program, 2008 through 2013* (August 20, 2007), Council Resolution #3902 (The 2008 - 2013 TIP) includes the *Walkway Program* as TIP Project #26 and the *Barrier Free Transition Plan Implementation* as Project #28.

The Transportation Systems Division of the Planning/Building/Public Works Department administers the Walkway Program. The TIP justification for the program is:

Providing safe and convenient non-motorized facilities is an integral part of a complete transportation network. Specific improvements will respond to the needs of school children, the aged and persons with disabilities, and will support increased use of transit. (Page 5-26, TIP)

Mirai Transportation Planning and Engineering was retained in February 2007 to prepare an updated Comprehensive Walkway Study. The study completes a number of tasks: update the inventory of existing sidewalks; prepare a Walk to School Route map for the Highlands Elementary School; identify gaps in the walkway system; identify key walkway centers; revise the priority evaluation criteria for improvements to include a 'primary walk to school route' criteria; and identify design guidelines, cost estimates and recommendations for walkway construction using the TIP and other funding sources.

This report summarizes the findings and recommendations of the study.



## Chapter 2

# WALKWAY INVENTORY

The TIP has several projects that involve the preservation, maintenance and reconstruction of the City's street pavements, including the Street Overlay Program. The Maintenance Division has annually retained Measurement Research Corporation to maintain and update the pavement, drainage and sidewalk inventory for all streets in the City as part of the Pavement Management System. All streets are inventoried every second year and all arterial streets are inventoried each year (all streets were inventoried in 2007).

During the inventory, extensive data on the pavement type, condition and width was collected for each street segment. Drainage type, shoulders, curb, gutter and sidewalk data were also collected. Sidewalk information also included an estimate of the proportionate length of each street segment that has sidewalks, by side of the street. If sidewalks exist, the inventory includes the sidewalk width, paving type and condition. All existing wheelchair ramps are inventoried, with an estimate as to whether the ramp substantially meets American Disabilities Act (ADA) guidelines or not. The availability of illumination is also included in the inventory. An example of the full inventory is shown in **Appendix A** in an Excel spreadsheet format.

Measurement Research Corporation has developed a methodology to collect the inventory data using a Geographic Information System (GIS) based mapping system and database. The City has two hand held computers that are programmed to assist in data upgrades.

The 2007 inventory is the basis for this Walkway Study.

The inventory base generally identifies each street segment in the City by assigning a unique number for each block of each street. However on very long blocks, segments are defined by length, in feet, from the beginning of the segment to a point at which characteristics are noticeably changed.

There are 2427 segments in the inventory, including all City streets, state highways (except limited access highways such as I-405 and SR 167 south of Grady Way), alleys, extensions of streets into adjacent jurisdictions and certain administrative segments to account for certain abnormalities. Each segment has a length in feet and the 2427 segments total to 232 miles of street centerline in the City of Renton. Each segment is identified with a functional classification as follows: Principal Arterial; Major Arterial; Minor Collector; Residential Street; Alley; King County Road; and State Highway.

The sidewalk, wheelchair ramp, curbs and gutter, drainage type and shoulder inventory data is separated into the left and right of the segment centerline. Each street segment has a beginning point and an ending point, identified as the centerline of cross streets. The left and right of centerline are identified by the direction from the beginning to the end of the segment. Generally, streets have been inventoried from south to north and from west to east.

A physical measurement of the length of each sidewalk segment was not made. Rather, a visual estimate of the approximate proportion of the segment length that included a sidewalk was recorded, estimated in 5 percent increments. A street segment with a sidewalk the full length on the right side was recorded as 100 percent sidewalk on the right

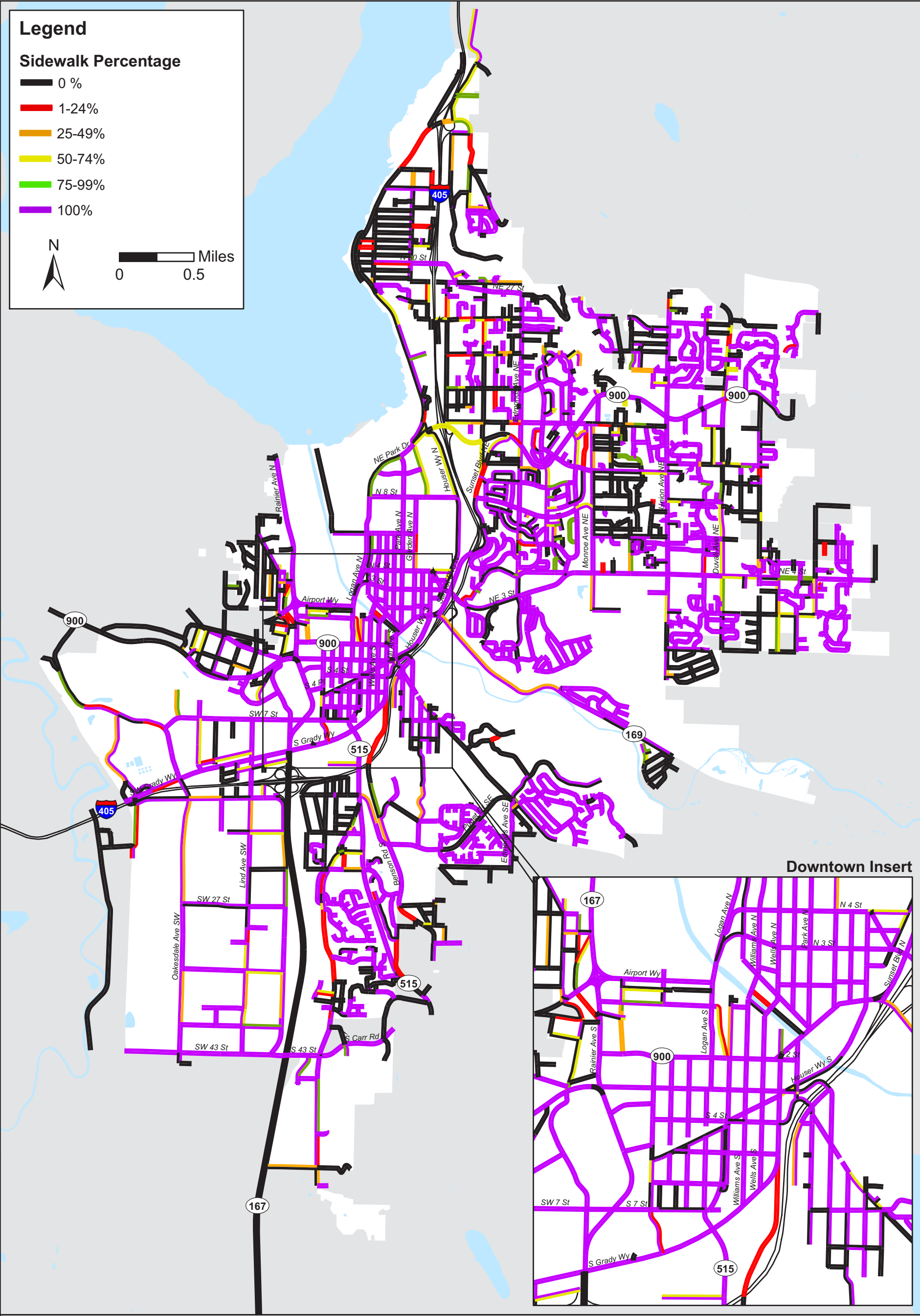
side. Each side was recorded separately. Therefore, with 232 segment centerline miles in the city, there is the potential for 464 sidewalk miles in the City of Renton.

The inventory shows that there are 266 miles of sidewalk in Renton, with 198 miles of potential sidewalk that is not in place. Missing sidewalks are on segments that range from no sidewalk on either side of a segment to a segment with 100 percent sidewalk on one side and a 10 percent gap on the other side.

Where sidewalks are identified, additional data was provided. The surface type of either Portland Cement Concrete (PCC) or asphalt concrete (AC) is identified. The sidewalk width (to the nearest foot) and a condition rating of 1 to 3 is provided. A condition of 1 has some trip hazards, 2 represents an aged sidewalk in reasonably good shape and 3 represents a relatively new sidewalk.

The inventory also includes information on the drainage type and, whether or not, there is a curb and gutter by the side of the street segment. If there is a curb, then an identification of the curb type and an estimate of the curb height in inches is made. If there is no curb, then the availability of a shoulder and its width and pavement type (PCC, AC, or gravel) is identified.

This inventory information was used to identify high priority projects within the missing segments of sidewalk using the recommended Project Priority Evaluation System described in Chapter 5. **Figure 1** shows the inventory data for sidewalks in place as of June 2007.



**Sidewalk Inventory**  
**Comprehensive Walkway Study - 2008**  
**City of Renton**

**Figure**  
**1**

## Chapter 3

# COMPREHENSIVE PLAN GOALS AND POLICIES

The 2003 *Comprehensive Citywide Walkway Study* included a review of the City's adopted Comprehensive Plan to ensure that the Project Priority Evaluation System generally conformed to the City's adopted Comprehensive Plan and implemented specific policies. To assure that the prioritization system and sidewalk capital improvement programming were consistent with the plan, 46 policies in the Comprehensive Plan were applied to the prioritization criteria.

The City intends to develop, or has developed, in the case of the South Renton Neighborhood Plan, enhanced streetscapes for the Downtown and North Urban Centers. These urban centers are high-density mixed-use areas where greater numbers of pedestrians are expected because housing, employment, shopping, and recreation opportunities are located close to one another. Sidewalks and walkways in these urban centers should be more substantive than minimum design standards to meet the increased use by pedestrians.



Chapter 4

## WALK TO SCHOOL ROUTE MAP

An important element of a pedestrian friendly neighborhood is that students are able to walk to and from their neighborhood school. School districts are required by Washington State regulations to have suggested walk route plans for every elementary school where at least some children walk to school. The City selected Highlands Elementary School to demonstrate the methodology of preparing a walk route map for a school. The City revised the priority project evaluation system to put a greater emphasis on sidewalk projects that improve safety on school walk routes.

The Washington Traffic Safety Commission and the Washington State Department of Transportation prepared the *School Administrator's Guide to School Walk Routes and Student Pedestrian Safety*, July 2003. This guide was used as the basis for developing the recommended school walk route map for Highlands Elementary School.

The figures on the following pages show the key steps involved in developing the walk route map.

**Figure 2** shows the enrollment boundaries of the Highlands Elementary School and the walking area as identified by the Renton School District. The State's definition of a walking area for an elementary school is the enrollment area within a one-mile walking distance along a walking path.

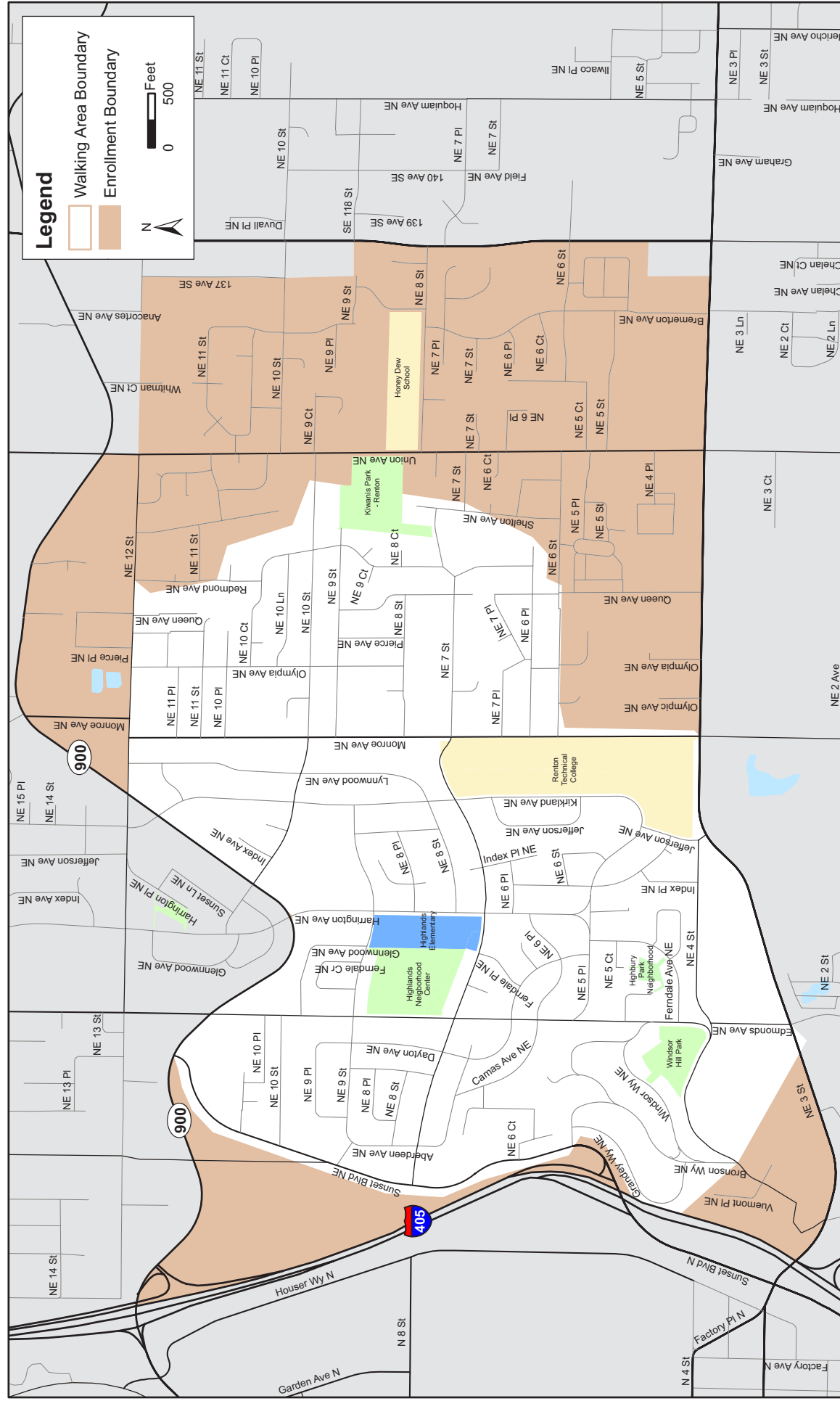
**Figure 3** shows the location of sidewalks in the 2007 inventory (from Figure 1) within the walking area of Highlands Elementary.

**Figure 4** shows the inventory of relevant traffic control and conditions within the walking area. Intersections with traffic signals, all way stop sign control, yield sign control and flashing red and yellow beacons are identified. The map also identifies locations of school cross walks, school zones with 20 mile per hour (mph) speed limit signs, marked cross walks, posted speed limits and arterial streets.

**Figure 5** shows the current average daily traffic (ADT) volumes on the relevant streets and the locations of recorded traffic accidents in a 3-year period within the walking area.

**Figure 6** shows the recommended Walk to School Route map for the Highlands Elementary School.



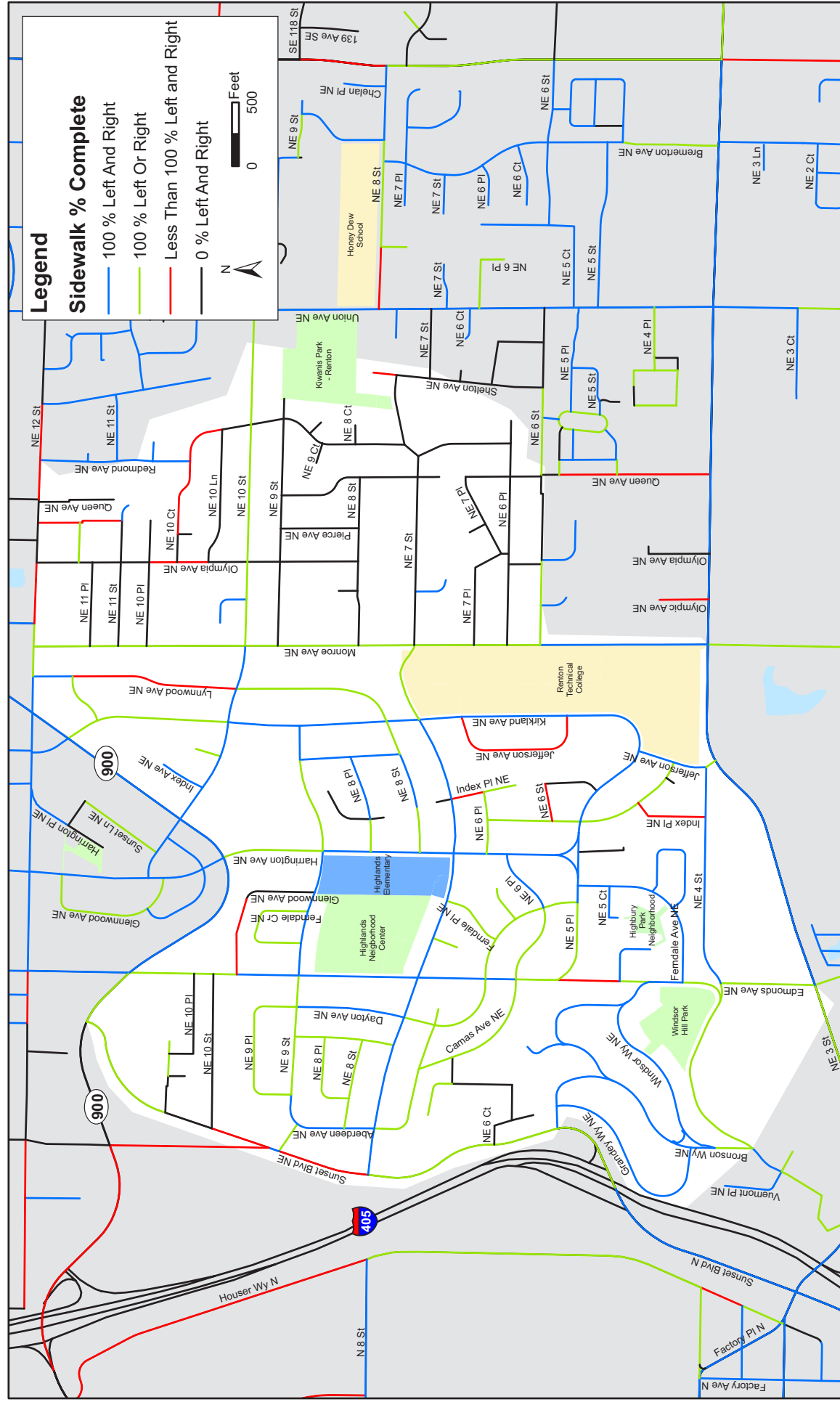


# Enrollment and Walking Area Boundaries

## Highlands Elementary School

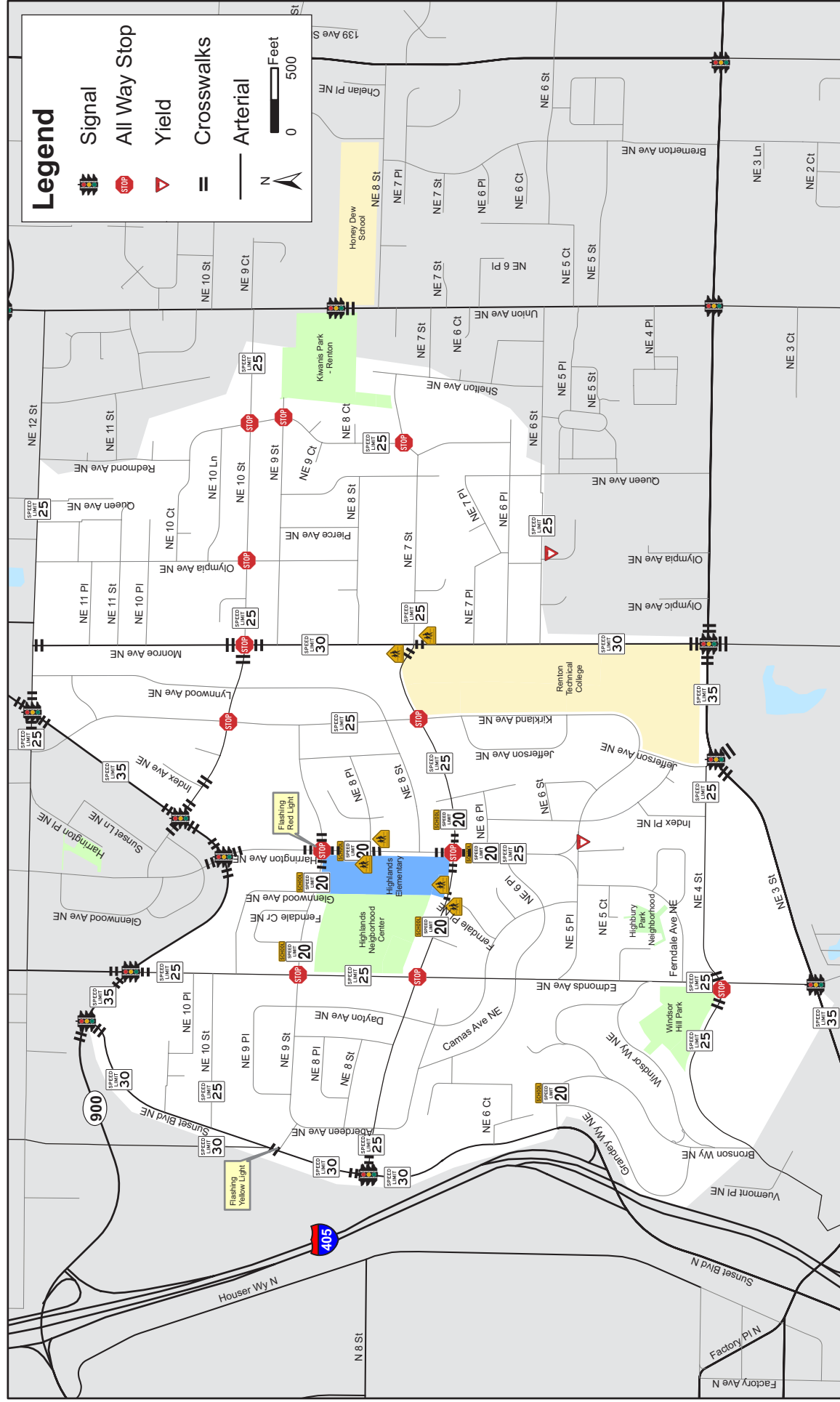
### City of Renton





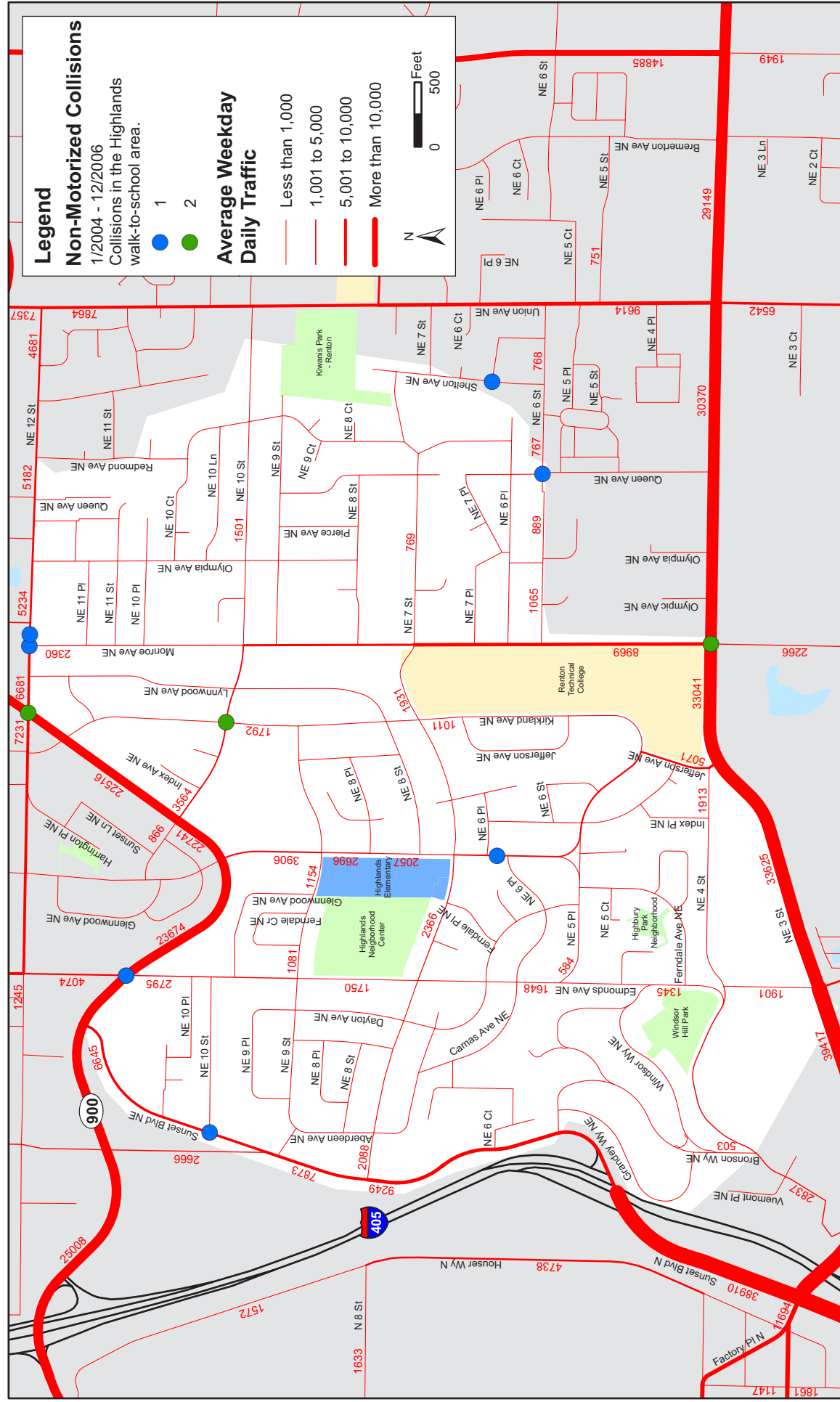
# Availability of Sidewalks in the Walking Area Highlands Elementary School City of Renton





**Relevant Traffic Control and Conditions**  
**Highlands Elementary School**  
**City of Renton**





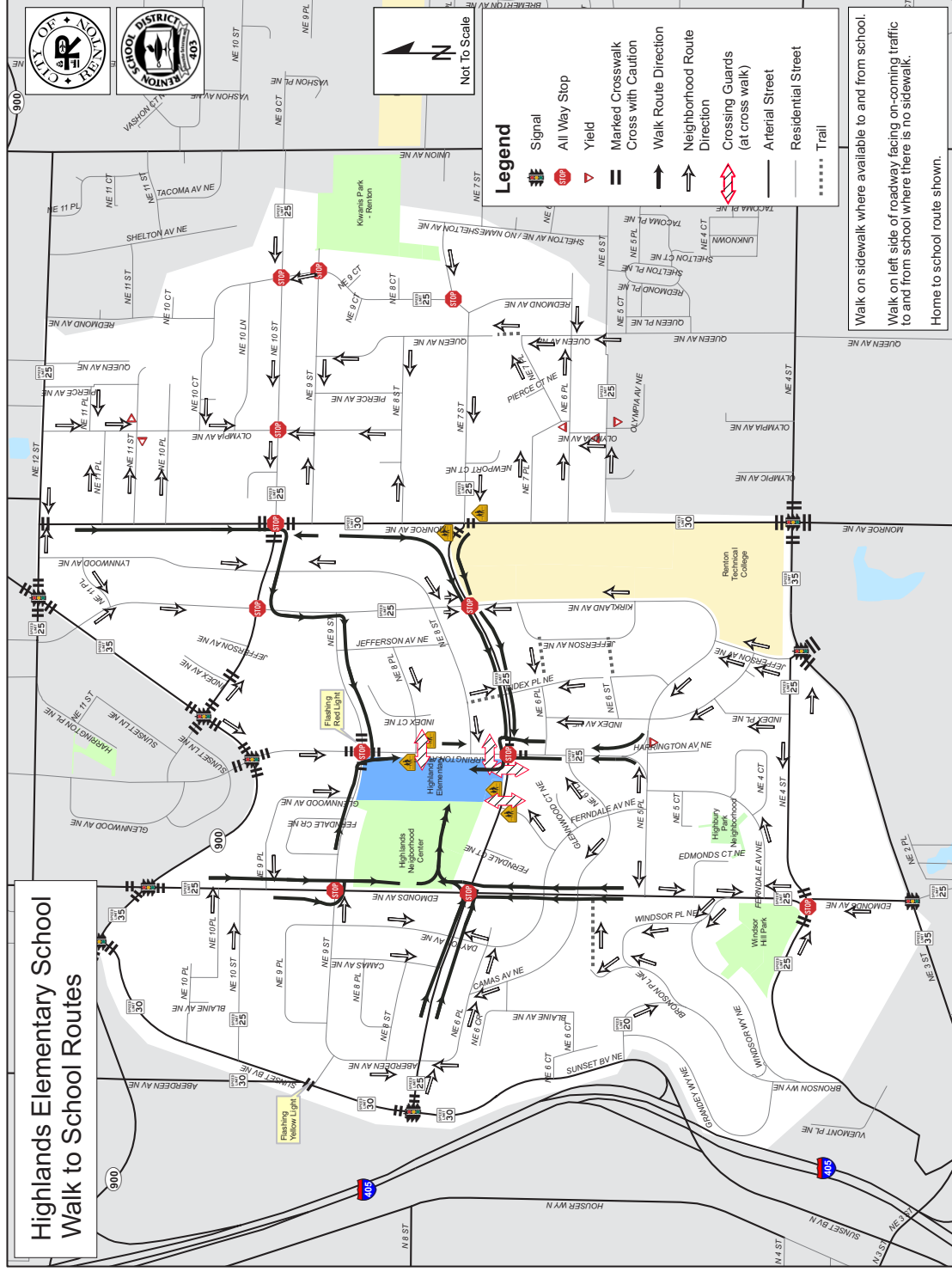
# Traffic Volumes and Recorded Non-Motorized Collisions

## Highlands Elementary School

### City of Renton



# Highlands Elementary School Walk to School Routes



August 27, 2007



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## Recommended Walk to School Route Map Highlands Elementary School City of Renton

**Figure 6**



## Recommended Walk to School Route Map

The map was designed to distribute to students at the start of the school year. The school distributed the map shown in Figure 6 to students at Highlands Elementary School in September 2007. It shows the recommended walk routes for the school in Fall 2007. If the City makes any physical changes to the sidewalks or traffic control in the area, the map should be updated.

The reverse side of the map explained how to use the map, identified parent responsibilities and reminded students of standard safe walking tips. **Appendix B** contains the text on the back side of the map.

The map only shows routes from home to school; the school to home walk is the reverse route. Solid lines with arrows show the primary walk to school routes where sidewalks are available. The open arrows in the neighborhoods show the recommended direction of the school walk route. To access a safer route to school in some neighborhoods, it is recommended that students walk away from school initially.

This is the case for the students living east of Monroe Avenue NE (except for those living on NE 7th Street and NE 10th Street.) There is no sidewalk on the east side of Monroe Avenue NE between NE 6th Street and NE 12th Street except for a short section north of NE 10th Street and a very short section south of NE 12th Street. Students living east of Monroe Avenue NE are faced with three options: (1) walking east to a route to get to Monroe Avenue NE on either NE 7th Street or NE 10th Street, or, (2) walking in the pavement of Monroe Avenue NE or in the unimproved shoulder of Monroe Avenue NE or (3) crossing Monroe Avenue NE at an unmarked crosswalk.

None of the latter options are recommended. Monroe Avenue NE is an arterial street with a 30 mph posted speed limit and traffic volumes that range from 2,500 to nearly 10,000 vehicles per day. However, there are marked crosswalks across Monroe Avenue NE at NE 12th Street and at the all-way stop sign at the intersection with NE 10th Street. There are also marked school crossings at NE 7th Street. These locations are where students should gather to get across Monroe Avenue NE.

Another example where students walk away from school first, is the students living on the east side of Edmonds Avenue NE south of NE 5th Place and in the Edmonds Court NE cul-de-sac. These students are encouraged to use a route that takes them south on Edmonds Avenue NE to Ferndale Avenue NE and on to school using the sidewalks on Ferndale Avenue NE, NE 5th Place and Harrington Avenue NE. This route avoids the intersection of NE 5th Place at Edmonds Avenue NE, which has a free turning left traffic flow traveling down the hill on Edmonds Avenue, turning onto NE 5th Place.

Students living west of Edmonds Avenue NE and south of Windsor Place NE are encouraged to use the full set of sidewalks in the neighborhood to reach the pedestrian trail that connects the north end of Bronson Place NE to Edmonds Avenue NE. Students then proceed to the school walking on Edmonds Avenue NE. This route avoids (1) a gap in the sidewalk on the west side of Edmonds Avenue NE south of NE 5th Place and (2) the intersection of NE 5th Place at Edmonds Avenue NE.

## Primary Walk Route to School

The Project Priority Evaluation System described in Chapter 5 includes an element identified as a 'primary walk route to school'. **Figure 7** shows the routes identified as 'primary walk routes to school' for Highlands Elementary School.

These 'primary walk routes' are within the Highlands Elementary School walking area and include the east side of Monroe Avenue NE between NE 6th Street and NE 12th Street and the west side of Edmonds Avenue NE south of NE 5th Place and north of NE 9th Place.

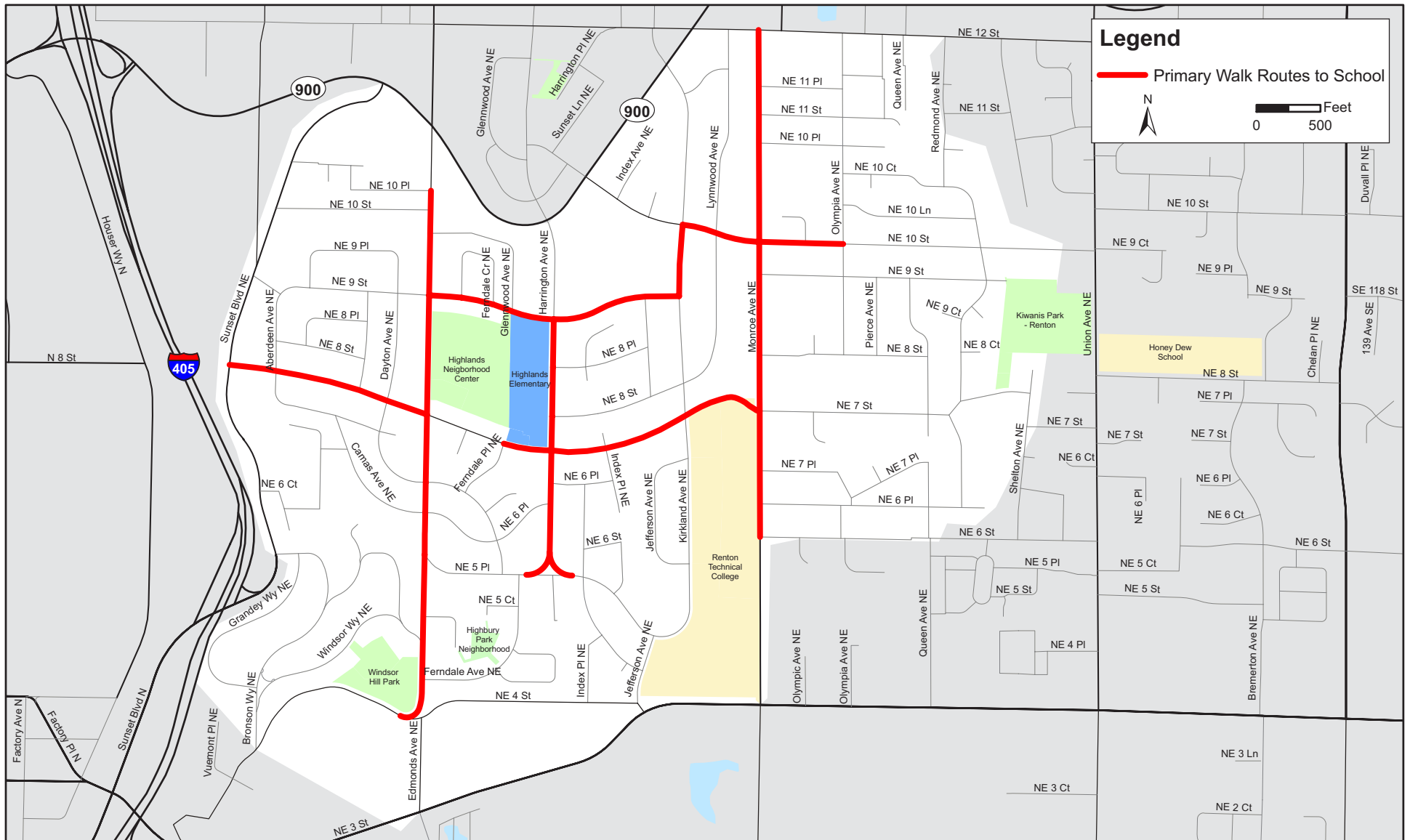
The recommended modification to the Project Priority Evaluation System includes a factor for street segments that are on a 'primary walk route to school'. Street segments without sidewalks on a 'primary walk route to school' would get extra points in the priority evaluation system. This action is consistent with the Comprehensive Plan policies.

## Highlands Community Center Walkway

The Highlands Community Center is located just west of Highlands Elementary School. The community center is a City of Renton recreation facility fronting on Edmonds Avenue NE with developed open space between the center and the school. There is an asphalt concrete pedestrian path from the school to the center, and a crushed rock surfaced path from the school to Edmonds Avenue NE. The crushed rock path is parallel to NE 7th Street approximately 130 feet to the north.

The staff and visitor parking lot and the passenger pick-up and drop-off area for the school on the west side of the school building have access to NE 7th Street. The school's internal sidewalk system connects to the school's main pedestrian entrance, the staff and visitor parking lot, NE 7th Street and the path to the community center. The sidewalk connection from the school entrance to the community center path is direct, short, and continuous without vehicular conflicts.

Some of the students walking to school from neighborhoods southwest of the school use either NE 7th Street or the path through the community center. While there is a sidewalk on the north side of NE 7th Street near the school, it is of poor quality and approximately 4 feet wide. Students who use the sidewalk must negotiate conflicts with vehicles using the parking lot and the pick-up/drop-off driveways. The traffic is congested before and after school at these driveways, which are controlled by student and adult safety patrols.



### Legend

— Primary Walk Routes to School



0 500 Feet



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## Primary Walk Routes to School Highlands Elementary School City of Renton

Figure  
7

## Chapter 5

# PROJECT PRIORITY EVALUATION SYSTEM

The Project Priority Evaluation System was derived from the City's Comprehensive Plan goals and policies. One major goal is to encourage more pedestrian movements in the City, another is safety. Enhancing neighborhoods of all types with pedestrian amenities is identified as desirable. The evaluation system used in the 2003 Comprehensive Citywide Walkway Study was revised and expanded for this 2008 study. **Table 1** identifies the eight (8) criteria of the evaluation system, along with the rationale and the range of points for each criterion.

The 'pedestrian safety factor' is an important criterion and is based on the traffic volume on the street segment. A higher traffic volume clearly increases the need for sidewalks as the potential for conflicts with vehicles increases. Higher traffic volumes also tend to be on streets with higher average vehicle speeds.

**Appendix C** shows the 2004 Traffic Flow Map that identifies the average daily traffic (ADT) on street segments where the sidewalks are missing. In the initial screening, all residential streets were assigned a traffic volume of less than 1000 vehicles per day. For the high priority sidewalk segments on residential streets, the study team checked available data and adjusted the volumes as needed.

During development of the walk route map for the Highlands Elementary School the concept of a 'primary walk to school route' was identified. This is a pedestrian-oriented classification used solely for the priority evaluation system. A 'primary walk to school route' criteria was added to the evaluation system to increase the priority for street segments that are used by a high number of school children walking to school. A street segment on a 'primary walk to school route' will receive 15 points. More 'primary walk to school routes' will be identified as walk route maps are developed for other schools in the City.

The 'pedestrian attractions' criterion identifies five sites - schools, the senior citizen center and senior housing facilities (includes social service agencies and housing for the disabled), hospitals, transit centers and bus stops and parks. Elementary schools are surrounded with the walking area buffers (generally, an area with a one-mile walking distance along the streets) while the other non-school attractions are expanded by 1000 foot buffers. Middle schools and high schools in the City have a one-mile radius buffer from the school building site (inclusive of the school's attendance boundary) to represent their walking areas.

**Table 1. Project Priority Evaluation System**

	Priority Points
<b>A. Pedestrian Safety Factor</b>  A good indication of the relative safety for pedestrians of one street relative to another is the level of traffic flow on the street. A higher traffic flow implies a higher vehicle speed and a higher portion of non-local traffic.	One point for every 1000 ADT (Potential range from 1-50+)
<b>B. Primary Walk Route to School</b>  A walkway that is on a Primary Walk Route to School will have a higher priority than other walkways near schools.	15 points for being a "Primary Walk Route to School"
<b>C. Pedestrian Attractions</b>  A walkway that serves more pedestrians should have a higher priority than one with a lower number of pedestrians. The following locations are identified as ones that tend to attract pedestrians. A potential walkway project is likely to serve one or more of the attractions. Additional points can be added for attractions serving more than one school.	(Potential range from 5 to 50+)
Schools (Within the designated walking area)	5 per school
Senior Citizen Center and Housing/Social Service Agency/Disabled	5
Hospital	5
Transit Center and Bus Stop	5
Park	5
Arterial Street	5
High Density Residential Neighborhood	5
Urban Center - North	5
Urban Center Downtown	5
Commercial/Mixed Use	5
Commercial Neighborhood	5
<b>D. Missing Link in Otherwise Continuous Network</b>  A walkway project that fills in a missing link in a walkway network will have a higher priority than one with similar conditions that is isolated.	10 points for being a "Missing Link".

<p><b>E. Distance from Site Specific Attraction</b></p> <p>A walkway project that is closer to a school, senior center, bus stop or park will have a higher priority than one that is further away.</p>	<p>&lt; 500 ft = 15 Pts 500-1000 ft =10 Pts 1000-1500 ft=5 Pts &gt; 1500 ft = 0 Pts (Potential range from 0 to 15 for each of 4 Attractions)</p>
<p><b>F. Relative Cost</b></p> <p>A medium or low cost walkway will have a higher priority than a high cost walkway.</p>	<p>Med. Or Low Cost = 5 pts High Cost = 0 pts (Potential range from 0 to 5)</p>
<p><b>G. Availability of Alternative Walkways</b></p> <p>A walkway project on a street segment with walkways on the other side of the street or in an adjacent park will have lower priority than a project with no alternative walking paths.</p>	<p>No Alternative = 10 Alternative Available = 0 Pts</p>
<p><b>H. Availability of Existing Street Right of Way</b></p> <p>A walkway project that can be constructed within existing Right of Way will have higher priority than one that requires new right of way.</p>	<p>Existing ROW =10 New ROW = 0 pts</p>

The ‘Pedestrian Attractions’ criterion also includes the neighborhoods a street segment serves. Neighborhood types that received points include high density residential, the urban center north, the urban center downtown, the commercial/mixed use centers and the commercial neighborhood centers. These neighborhood types are defined in the City’s Comprehensive Plan. Each neighborhood boundary was expanded by a 1000-foot buffer to provide an overlapping series of neighborhoods. Many sidewalk segments serve more than one neighborhood type and receive additional priority points for each neighborhood type.

The Comprehensive Plan specifically identifies arterial streets to have sidewalks and, therefore, they are given extra points as a pedestrian attraction. A total of eleven attractions are possible. Actual application of the data results in street segments receiving points up to nine of the eleven pedestrian attractions at the rate of 5 points per attraction.

The ‘distance from site specific attraction’ criterion refers to the distance a sidewalk segment is from a site specific attraction. Points for the distance from a site specific attraction (school, senior center, bus stop or park) was determined from a GIS analysis using distance from the boundaries of the attractions. The distance was measured in 500-foot increments up to 1500 feet from the attraction. A segment within 500 feet of an attraction received 15 points. A segment from 500 to 1000 feet, 10 points; from 1000 to 1500 feet, 5 points, and zero points if over 1500 feet. Actual application of the data resulted in street segments receiving up to 50 points for these criteria. These points are added to the pedestrian attraction criteria.

**Figure 8** shows the school sites, senior facilities, hospital, bus stops and parks in the City. Metro Transit provided the data for the bus stops shown in Figure 8. **Figure 9** shows the arterial street system. The neighborhood types with their 'buffers' are shown on **Figure 10**.

Several criteria have been brought forward from the 2003 and 1992 reports. The 'missing link in the otherwise continuous network', 'relative cost', 'availability of alternative walkways' and 'availability of existing street right of way' criteria were included in both prior reports.

The 'missing link' points were derived from a GIS produced map of the inventory data. See **Figure 11** for the identified missing links. A missing link is identified as a street segment with missing sidewalks:

- On a transit route; or
- On a street with a short portion of sidewalk missing (less than one-quarter mile) on both sides within an otherwise continuous walkway system of a sidewalk on one side or the other of connected street segments.

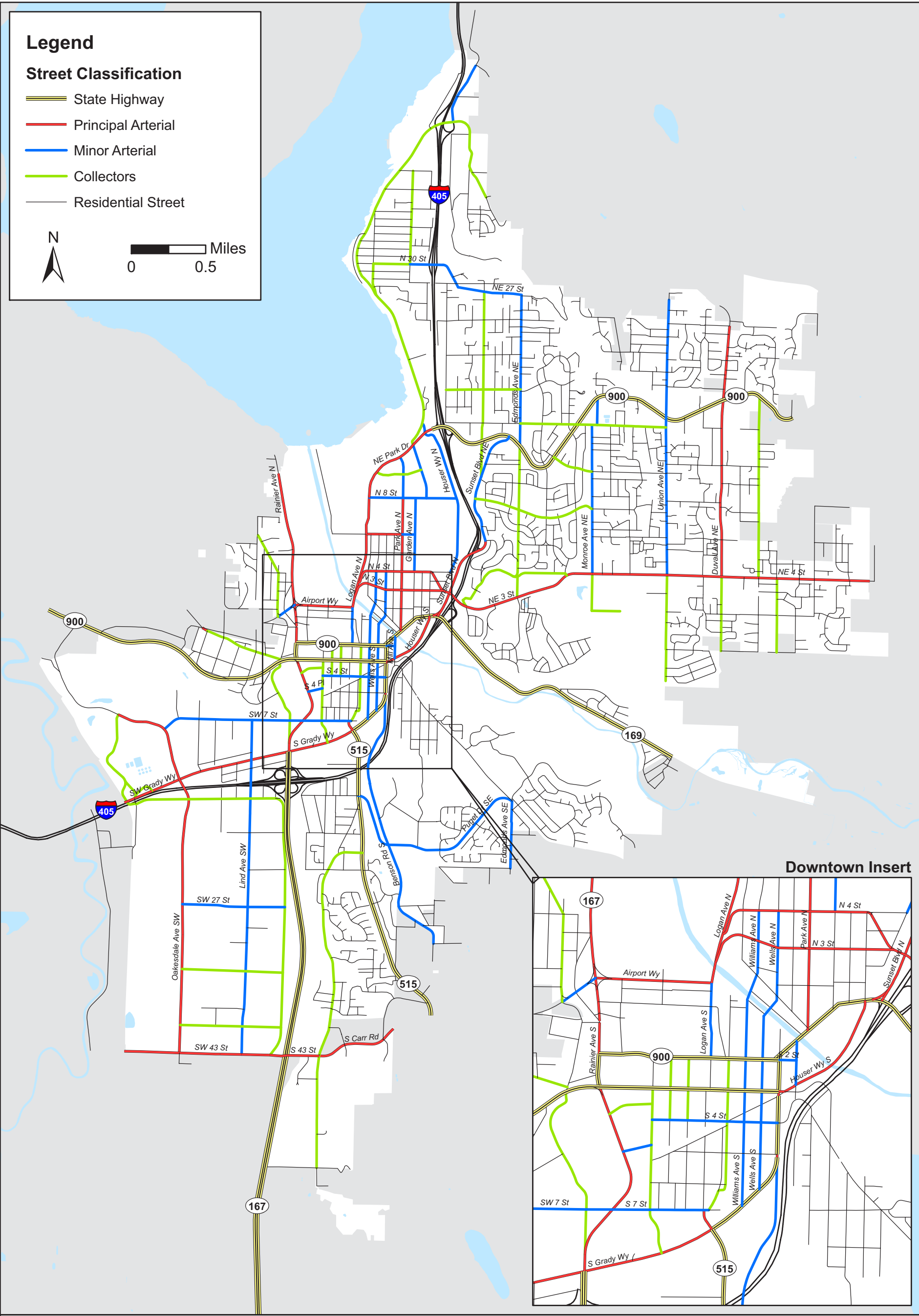
The 'relative cost' and availability of 'alternative walkways' points were determined from a set of spreadsheet data. A segment was initially identified as either a medium cost (average cost of \$151.00 per linear foot) or a high cost segment (average cost of \$589.00 per linear foot), depending on the underground drainage requirements to provide street standard sidewalks. The study team identified the top 50 projects and then field checked for more detailed cost evaluation. The points for these top 50 projects were refined to a sliding scale of 1 to 5 points for relative cost.

The availability of 'alternative walkways' criterion provides that a walkway project, on a street segment with a sidewalk on the other side of the street or a walkway in an adjacent park, will have lower priority than a project with no alternative walking path. If there is no alternative walkway 10 additional points are allocated. However, arterial streets, bus routes and primary walk to school routes are allocated the 10 points even if there is a full sidewalk on the other side of the street, to support full sidewalks on both sides of these street segments.

The initial screening assumes that all projects had 'available right of way'. The highest priority projects were checked for right of way and adjusted by removing 10 points if right of way is not available.

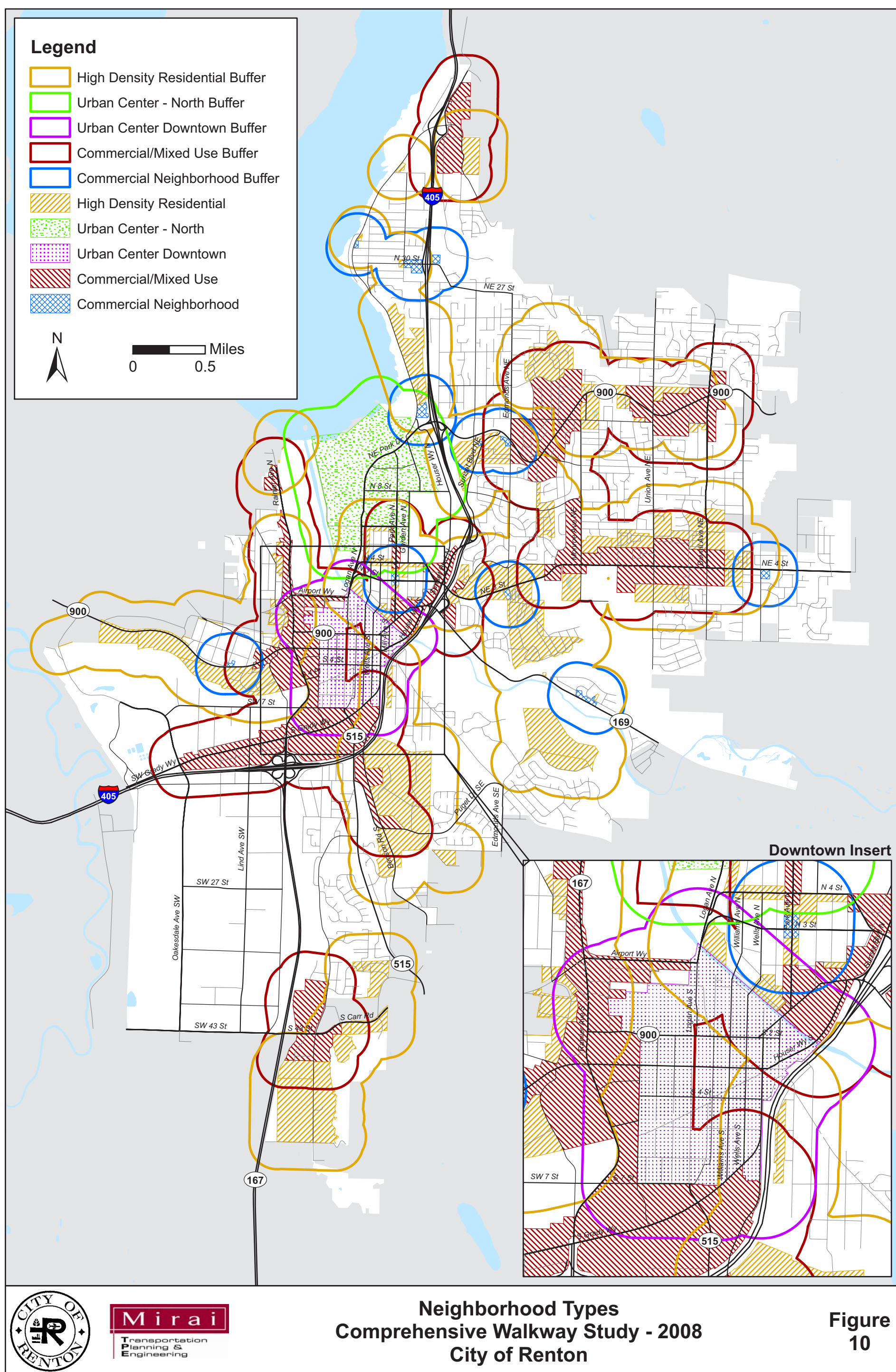
**Appendix D** shows an example of applying the point system with the segments are listed in alphabetical order. The complete listing is included in an appendix under separate cover. The spreadsheet and Geographic Information System (GIS) base of the data made the application possible to all missing sidewalk segments.

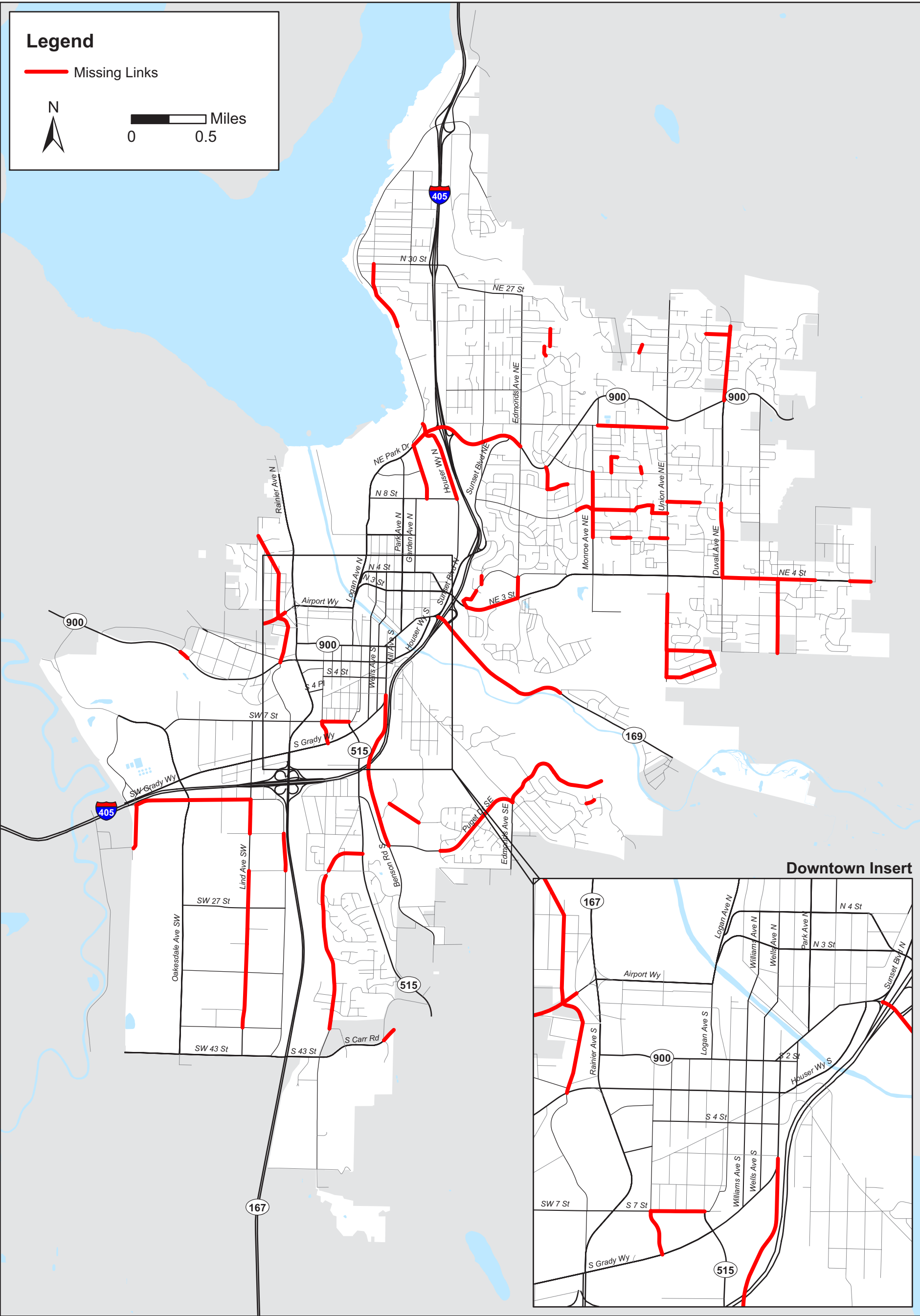




**Arterial Streets**  
**Comprehensive Walkway Study - 2008**  
**City of Renton**

**Figure**  
**9**





**Missing Links**  
**Comprehensive Walkway Study - 2008**  
**City of Renton**

**Figure**  
**11**

## Chapter 6

# WHEELCHAIR RAMPS AND ADA COMPLIANCE

### American Disabilities Act (ADA)

The Americans with Disabilities Act of 1990 (ADA), Public Law 101-336, was signed into law on July 26, 1990. The ADA prohibits discrimination on the basis of disability in private sector employment, services rendered by state and local governments, places of public accommodation, transportation, and telecommunications.

The ADA requires public entities with more than 50 employees to develop a transition plan to bring the public facilities into compliance with the law of the ADA. The transition plan must identify all structural modifications that are needed to buildings and facilities to ensure that programs, services and activities are accessible to people with disabilities. The transition plan must identify the steps necessary to complete the modifications and a time-frame for the needed modifications. The Transition Plan must include the following items:

- The physical barriers in buildings and facilities that limit the accessibility of programs, services and activities to individuals with disabilities.
- Describe the modifications necessary to make the building or facility accessible.
- Provide a schedule for making the modifications necessary to ensure compliance. If the modifications will require more than one year, identify the steps that will be taken to ensure that the program, service or activity is accessible.
- Identify the individual responsible for the implementation of the Transition Plan.

Public entities with jurisdiction over streets, roads and walkways must include in the transition plan a schedule for installing wheelchair curb ramps. Curb ramps are to be installed along accessible routes providing access to buildings and facilities where government programs and services are located, to public transportation, places of public accommodation, and employers.

This chapter is an element of the ADA transition plan for the City of Renton with respect to compliance of wheelchair curb ramps on the street right of way.

### Current Wheelchair Ramps

Wheelchair curb ramps are a part of the street inventory. **Figure 12** shows the location of the existing ramps in the City as reported in the inventory. A judgment was made to identify American Disabilities Act (ADA) compatibility with respect to the City of Renton Street Standards. Locations identified with an 'A' were judged to be ADA compliant. ADA compliant includes ramps that meet current standards for ramps, and ramps that met the existing ADA standards when they were constructed. This generally includes all ramps with a 'Grid' in the pavement of the ramp. The pavement grid in the ramp was initiated by earlier ADA regulations. Locations identified with a 'Y' indicate that a ramp exists, but in the opinion of the inventory personnel it does not meet ADA standards. Generally this means that there is no 'grid' of any kind in the pavement of the ramp. The ADA guidelines requiring "detectable warnings" on new ramps are described in the following section.

The inventory identifies 2,974 wheelchair ramps in the City with 2,196 of them judged to be ADA compliant when inventoried and 778 ramps judged to not be ADA compliant. This is an increase of 249 total ramps since 2002 with 326 additional ADA compliant ramps and 77 fewer ramps that do not meet ADA standards.

The current City policy is to install ADA compliant ramps when sidewalks and curb ramps are constructed. If a new ramp is installed on one end of a crosswalk as a result of new construction, then the other end of the crosswalk is provided with a ramp as well.

The *Barrier Free Transition Plan Implementation* is Project #28 of the City's 2008-2013 Six-Year Transportation Improvement Program (TIP). The Barrier Free Program looks for locations where no ramp exists when installing curb ramps as well as replacing existing non-compliant ramps.

The Barrier Free Transition Plan Implementation project is allocated \$50,000 per year in the six-year TIP. Curb ramps identified for construction are prioritized by:

- Citizen identification of need;
- Providing access to public buildings;
- Completing the accessibility of a crosswalk with partial ramps;
- Constructing ramps in high pedestrian areas; and
- Reconstructing existing ramps that are non-ADA compliant.

## Detectable Warnings

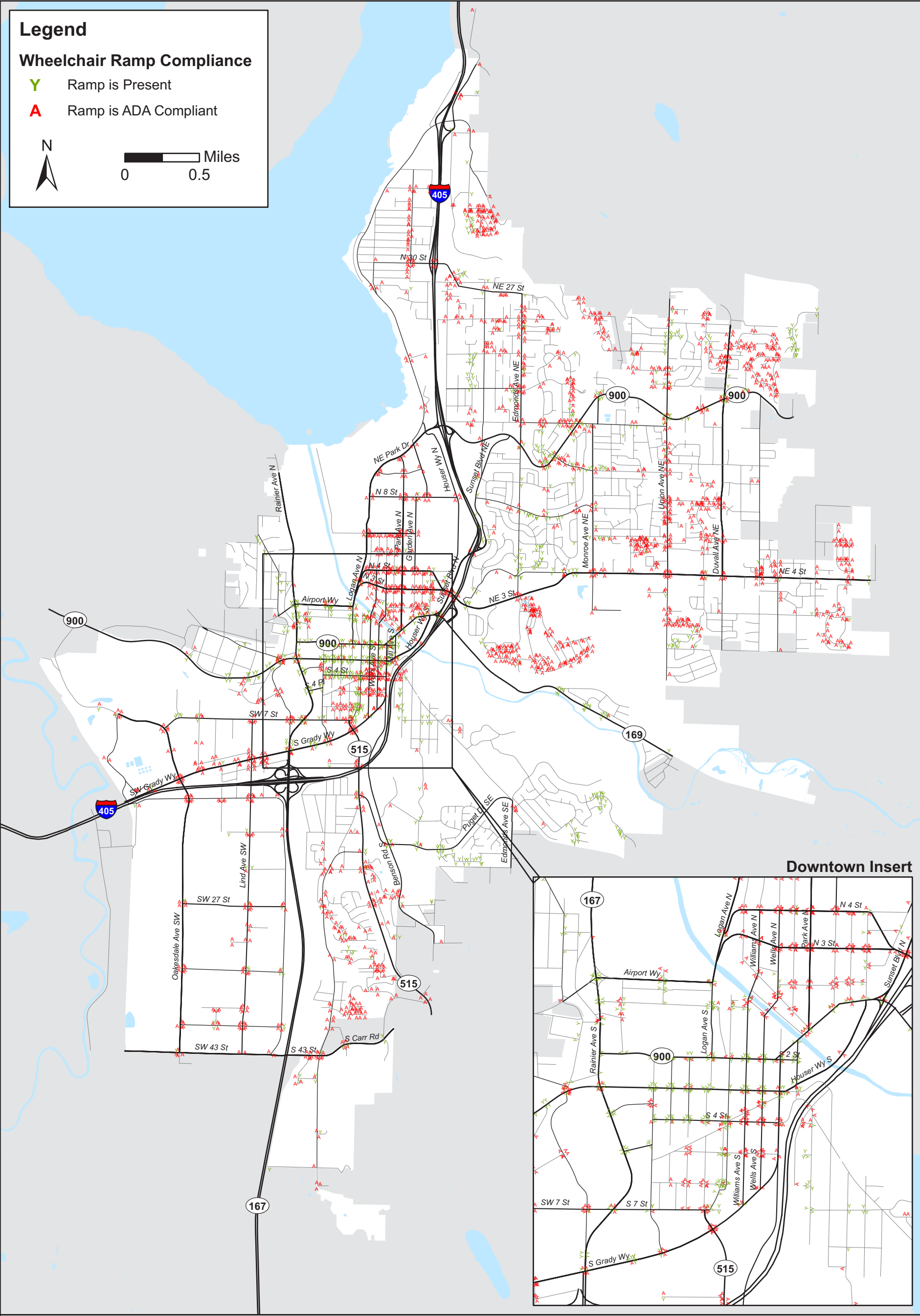
The U.S. Department of Justice has determined that detectable warnings are required on all pedestrian facilities altered after July 26, 2001. Projects constructed after that date are not ADA compliant if they do not feature truncated domes in a visually contrasting field on wheelchair ramps. Detectable warnings are required at the interface between pedestrian and vehicle facilities. Detectable warnings are needed to warn sight impaired pedestrians that they are leaving the pedestrian facility and entering the roadway. In most places on urban streets, the curb serves as the detectable warning between the sidewalk and the street. However, at wheelchair ramps there is no curb, so another detectable warning is needed on the ramp. Truncated domes are a unique design that can be detected underfoot and with a cane.

Truncated domes are the only detectable warning that meets Federal ADA guidelines and Washington State requirements. The diamond pattern that has been used on wheelchair ramps by most agencies for many years is not detectable by sight impaired pedestrians, and does not meet ADA requirements for detectable warnings. Truncated domes are to be used primarily on wheelchair ramps at street crossings.

The current WSDOT Standard Plans require a 2-foot deep area of truncated domes in a yellow field the width of the ramp, at the bottom of the ramp with a minimum 4-foot wide ramp. For a 4-foot wide ramp an 8 square foot area of truncated domes are required.

The City of Renton requires truncated dome detectable warnings in a yellow field on all wheelchair ramps constructed or altered by the City or by developer projects. There is no regulatory requirement to retrofit existing sidewalk ramps that met the applicable ADA ramp standard at the time of their construction.





## Chapter 7

# SIDEWALK DESIGN GUIDELINES

The City's current policy is to construct full standard sidewalks on City streets when construction occurs. The following section identifies the City's current street standards. The second section in this chapter identifies lower cost alternatives. We recommend the City evaluate and consider the low cost alternatives.

## Current Sidewalk Standards

The *City of Renton Standard Plans for Road, Bridge and Municipal Construction* includes standard plans for sidewalk construction in the City at *Standard Plans F5005 F005-1, F005-2, F007 and F009*. Standard Plans F010 through F014 are for various types of standard sidewalk curb ramps. *Section 4-7-100A of the Renton Subdivision Ordinance* requires the construction of sidewalks in subdivisions per the Street Improvement Ordinance. *Section 4-6-060F2 (Minimum Standards) of the Street Improvements Ordinance* identifies the sidewalk widths required on residential access, commercial access, industrial access and collector streets. *Section 4-6-060F4* allows the design standards for arterial streets to be established on a case by case basis. Alleys and Private Streets are not required to have sidewalks.

In addition, the Comprehensive Plan includes policies for the Urban Center Downtown and Urban Center North areas to encourage enhanced pedestrian design. **Appendix E** includes the Standard Plans and the appropriate code sections.

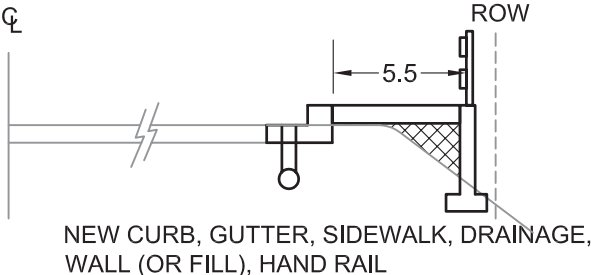
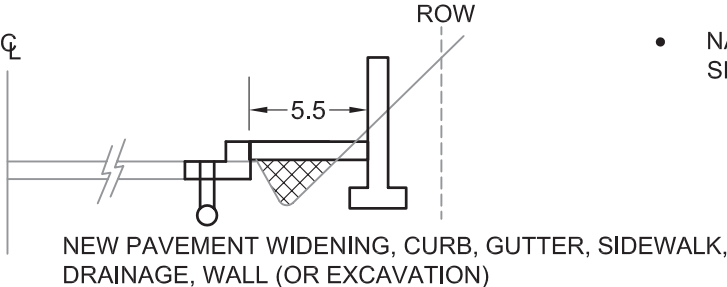
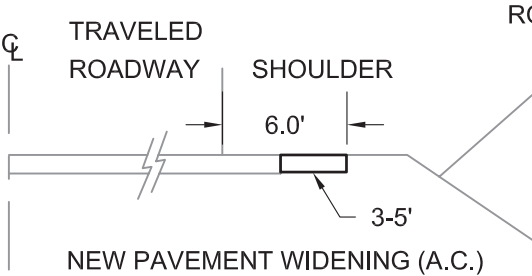
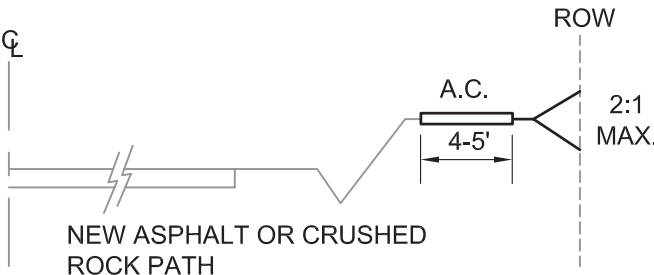
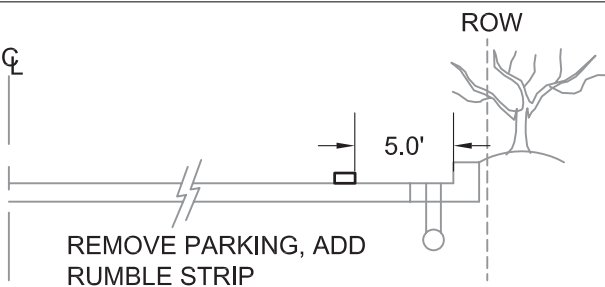
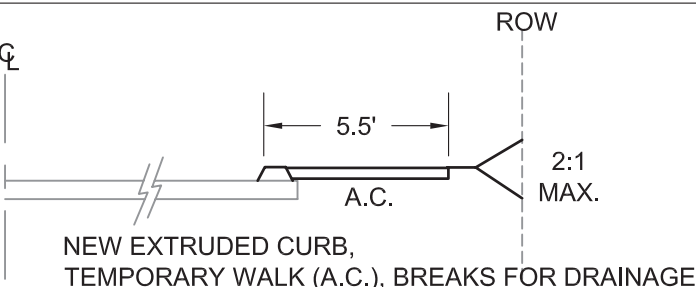
## Sidewalk Designs

**Figure 13** shows the application of the street standards in six types of existing street conditions. Each section of an existing street without a sidewalk was identified as a "high" or "medium" cost section using the pavement condition inventory of the curb, gutter and drainage types. Sidewalk Sections A, A-1, A-2 and B assume that curb, gutter and underground drainage exist without sidewalks. Sections A and B are identified as "medium cost" sections, because only grading and sidewalk construction would be required with estimated costs for full standard sidewalks at \$133 to \$169 per linear foot (\$700,000 to \$900,000 per mile of sidewalk). Sections A-1, A-2, C and C-1 on **Figure 13** and sections D and E on **Figure 14** have various road side conditions with existing underground drainage or shoulders and ditch drainage available. Construction of standard plan sidewalks requires some pavement, curb, gutter, underground drainage and/or fill or cut wall improvements. These are identified as "high cost" sections with estimated costs for full standard sidewalks at \$435 to \$705 per linear foot (\$2,300,000 to \$3,700,000 per mile).



<b>A</b>	<p>NEW SIDEWALK</p>	<p><u>EXISTING CONDITION</u></p> <ul style="list-style-type: none"> <li>• CURBED ROADWAY</li> <li>• DRAINAGE</li> <li>• FLAT</li> </ul>
<b>A-1</b>	<p>NEW SIDEWALK, WALL (OR FILL), HANDRAIL</p>	<ul style="list-style-type: none"> <li>• CURBED ROADWAY</li> <li>• DRAINAGE</li> <li>• FLAT</li> </ul>
<b>A-2</b>	<p>NEW PLANTER STRIP, SIDEWALK, WALL (OR EXCAVATION)</p>	<ul style="list-style-type: none"> <li>• CURBED ROADWAY</li> <li>• DRAINAGE</li> <li>• FLAT</li> <li>• WIDE ROW</li> </ul>
<b>B</b>	<p>NEW PLANTER STRIP, SIDEWALK</p>	<ul style="list-style-type: none"> <li>• CURBED ROADWAY</li> <li>• DRAINAGE</li> <li>• FLAT</li> <li>• WIDE ROW</li> </ul>
<b>C</b>	<p>NEW CURB, GUTTER, SIDEWALK, DRAINAGE, PLANTER STRIP</p>	<ul style="list-style-type: none"> <li>• SHOULDER</li> <li>• FLAT</li> <li>• WIDE ROW</li> </ul>
<b>C-1</b>	<p>NEW CURB, GUTTER, SIDEWALK, DRAINAGE</p>	<ul style="list-style-type: none"> <li>• SHOULDER</li> <li>• FLAT</li> <li>• WIDE ROW</li> </ul>



D	 <p>NEW CURB, GUTTER, SIDEWALK, DRAINAGE, WALL (OR FILL), HAND RAIL</p>	<p><u>EXISTING CONDITION</u></p> <ul style="list-style-type: none"> <li>NARROW SHOULDER IN FILL SECTION</li> </ul>
E	 <p>NEW PAVEMENT WIDENING, CURB, GUTTER, SIDEWALK, DRAINAGE, WALL (OR EXCAVATION)</p>	<ul style="list-style-type: none"> <li>NARROW SHOULDER IN CUT SECTION</li> </ul>
F	 <p>NEW PAVEMENT WIDENING (A.C.)</p>	<ul style="list-style-type: none"> <li>WIDE SHOULDER</li> <li>CUT OR FILL</li> </ul>
G	 <p>NEW ASPHALT OR CRUSHED ROCK PATH</p>	<ul style="list-style-type: none"> <li>NARROW SHOULDER</li> <li>DITCH</li> <li>WIDE ROW</li> </ul>
H	 <p>REMOVE PARKING, ADD RUMBLE STRIP</p>	<ul style="list-style-type: none"> <li>WIDE ROADWAY</li> <li>CURBED SECTION WITH DRAINAGE</li> <li>NARROW ROW</li> </ul>
I	 <p>NEW EXTRUDED CURB, TEMPORARY WALK (A.C.), BREAKS FOR DRAINAGE</p>	<ul style="list-style-type: none"> <li>WIDE SHOULDER</li> </ul>



## Temporary Low Cost Walkways

Figure 14 identifies four potential sidewalk sections that could be temporary “low cost” improvements. Section F would involve widening an existing narrow shoulder to a minimum width of 6 feet or more to allow walking on one side of a low volume street. Section G envisions a location where there is ditch drainage, with enough street right of way to install an asphalt concrete or gravel walkway between the ditch and the edge of the right of way. The grade of the walkway would not need to be tied to the street grade. Section H assumes an existing wide pavement with sufficient width to identify a walkway with paint or rumble stripes within the existing pavement, possibly removing or restricting parking. Section I is a version of Section F giving a vertical separation from the roadway with a non-standard sidewalk section. These “low cost” walkway improvements would provide a non-street standard walkway in areas that do not have existing underground drainage (except Section H) at an estimated cost of \$64 to \$146 per linear foot (\$340,000 to \$775,000 per mile).

Using the TIP Walkway Program funds to allow the installation of temporary low cost improvements for walkways on existing streets with no sidewalks would be a new policy direction for the City.

The policy question discussion should include consideration of the following ideas.

- A. Sidewalks and walkways are highly desirable.
- B. Of the 463 miles of street edge in the City of Renton, 266 miles of sidewalks are in place .
- C. One hundred forty two miles of street centerline have 100% sidewalk on at least one side.
- D. About 197 miles of sidewalk are missing, when using an objective of “a sidewalk on both sides of every street”
- E. Sidewalks are not necessarily desired on both sides of all existing streets. Existing cul-de-sacs, other low traffic volume residential streets and streets with a variety of physical constraints are examples where they are not necessary. The current street standards require sidewalks on both sides of all ‘new’ streets in Renton.
- F. Sidewalks are desirable on:
  - Both sides of all Arterial streets.
  - Both sides of all streets in the Central Business District and commercial and employment centers.
  - Both sides of residential streets that are transit routes, neighborhood collector streets, primary walk to school routes and streets that are near pedestrian attractions.
- G. New sidewalks built to City Street Standards cost from \$700,000 to \$3,700,000 per mile of sidewalk.
- H. Temporary sidewalks could be constructed on some residential and collector street segments where the existing conditions are appropriate. The cost data of Figure 14 indicates that temporary walkways could be constructed for about \$700,000 per mile.

**Table 2** shows the number of years to ‘build out’ the sidewalk system on one side of every street in Renton under various assumptions of investment and portions of the new sidewalks that meet current street standards and temporary walkway standards.

**Table 2. Years to build out sidewalks on one side of every street in the City**

Annual Expenditure	100% Street Standard Sidewalks	60% Street Standard 40% Temporary	40% Street Standard 60% Temporary	100% Temporary
\$250,000 Per Year	600	460	380	220
\$500,000 Per Year	300	230	190	110
\$750,000 Per Year	200	150	125	70
\$1,000,000 Per Year	150	115	95	55

Notes:

Average street standard cost per mile: \$ 2,000,000

Average temporary sidewalk cost per mile: \$700,000

Total miles: 78

All costs are based on the typical cross section cost estimates of Figures 13 & 14 plus the inventory data and do not include inflation. Use the cost data for relative evaluation only.

This table points out the potential benefit of adopting a new policy option so that when new walkways are constructed, they could be built to meet a revised street standard.

Policy options the city should consider include:

- Continuing the current policy, constructing the highest priority projects first.
- Adopting low cost options for appropriate locations.
- Revising sidewalk objectives from a constructing full sidewalk on both sides of every street to building a sidewalk on at least one side of the street.
- Increase annual expenditures in the TIP for the Walkway Program.

As an example, the east side of Edmonds Avenue NE from Edmonds Court NE to NE 5th Place (Project #23 in Table 3) is one location where a revised policy could apply. This section has a poor quality asphalt concrete shoulder that slopes toward the roadway with a drainage channel at the edge of the roadway. Upgrading of the asphalt pavement on this shoulder would provide a significantly improved temporary walking surface on a ‘primary walk route to school’ with relatively low cost.

## Relative Cost Estimates

Figures 13 and 14 shows the Opinion of Probable Costs for 2007 cost estimates on a relative scale for the twelve sidewalk sections identified. It is important to use these estimates as relative costs and not as project specific costs.

These cost estimates are generic in nature and do not reflect the actual cost estimate of any project at any given location. The cost estimates assume construction of a 500-foot segment of sidewalk on one side of a street. The estimates assume that right of way is available and the relocation of existing utilities is not required. Project management and design costs are included as well as a 20 percent construction cost contingency. No inflation factor has been applied to reflect future year construction. The detailed estimates are available at the City of Renton with summaries in **Appendix F**.

On this basis, the top \$4,000,000 worth of projects is included in the Recommended Projects chapter. This amount requires more funds than are generated in a six-year program at the rate of \$250,000 or \$500,000 per year with no inflation included.



## Chapter 8

# PUBLIC INVOLVEMENT

Public Involvement was an important part of this study. All residents, businesses, and visitors use the City sidewalks and are concerned about pedestrian facilities.

## City of Renton Non-Motorized Citizen's Advisory Committee

City of Renton Transportation Systems Division staff and consultants met with the members of the Non-Motorized Citizen's Advisory Committee on July 12, 2007 and on November 1, 2007. The Non-Motorized Citizen's Advisory Committee has members that represent the community, the schools, businesses, seniors, bicyclists and others. The initial meeting described the scope of the walkway study, presented the draft Walk to School Route Map for Highlands Elementary and reviewed the revised Project Priority Evaluation System. At the follow-up meeting, the committee members learned more about revisions to the priority evaluation system criteria and the preliminary conclusions. The committee members were provided a preliminary draft report for review and comment.

## Public Information

Public information on the Comprehensive Citywide Walkway Study has been available on the City of Renton Transportation Systems Division web page for the latter phases of the project. In addition, the public open house was advertised in the local newspaper as well as through written notice in the city utility billings.

## Meeting with Highlands Elementary School PTA

As a part of developing the walk routes for Highlands Elementary school, the consultant and City staff met with the PTA and shared the results of the existing inventory of the conditions within the school walking area. Parents shared information about other locations of concern on the adjacent streets. The principal and teachers created a mapping lesson for the 5th grade students. Students were asked to map the way they walked to school each day. The principal and teachers reviewed the final Walk to School Route Map, before the City printed it, one for each student attending the school.

## Public Open House

A public Open House was held on February 26, 2008 from 3:00 to 8:00 p.m. at the Renton High School. The Open House featured GIS (Geographic Information Systems) maps of the City as they relate to the existing walkway network, pedestrian attractions and missing links in the current sidewalk system. City of Renton Transportation Systems Division staff supported by engineering and planning consultants were on hand to discuss the information and answer citizen questions.

Fourteen Renton citizens attended the workshop. Citizens were also asked to complete a comment sheet in order to further document specific concerns or sidewalk issues. These specific citizen comments are set forth in **Appendix G**.



## RECOMMENDED PROJECTS

**Table 3** lists sidewalk projects for the top 29 street segments identified from the Project Priority Evaluation system. The total scores for these street segments range from a high of 110 to 95. The relative cost estimate for each street segment is shown in the table. This is the relative cost to complete the lower cost side of the street segment. In some cases the project would complete the first side of the segment, and in some cases one side of the street segment already has sidewalk and the project would be to complete the other side. The 29 projects total approximately \$4 million, well over the \$1.5 million that would be generated by six years of the Walkway Program, funded at \$250,000 per year (\$3.0 million if funded at \$500,000 per year). The intent is to provide a list of projects that may qualify for funding from various funding sources, when and if such funds become available.

**Figure 15** shows the location of these top 29 street segments. The entire street segment is shown, even though in many cases only a portion of the segment requires new sidewalk to complete the lowest cost side.

There are several locations in the City where a set of high priority projects could be joined together for a construction project for a neighborhood. **Appendix D** is a sample of street segments in the City with missing sidewalks with the project priority system applied.

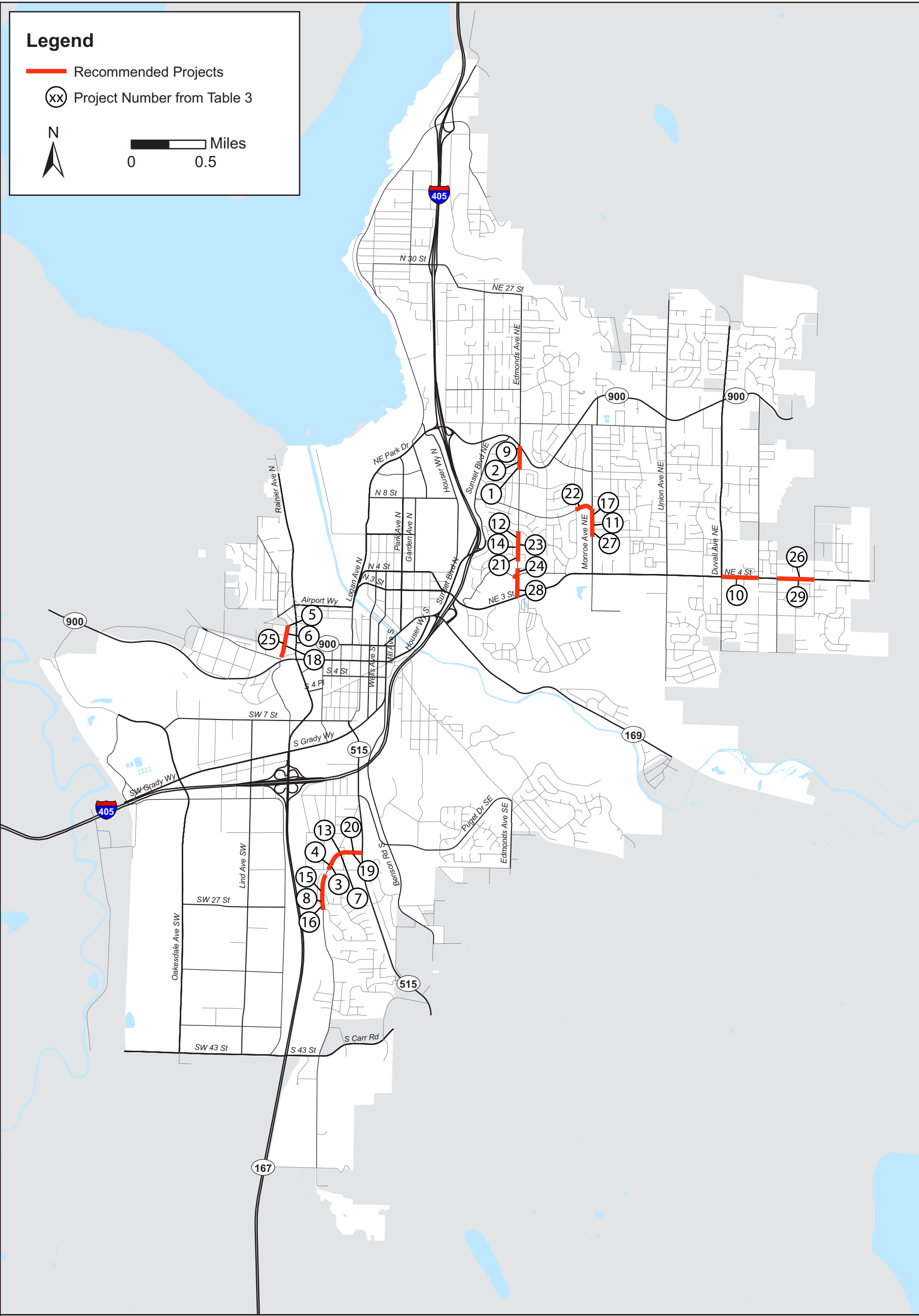
**Appendix H** is a list of the top 200 projects in rank order with the project priority system applied.

It is recommended that the City use these lists to annually develop a set of construction projects for the current year Walkway Program under the City's 6-Year TIP.



**Table 3. Recommended Projects**

Rank	Street Name	From Description	To Description	Side of Street	Total Points	Relative Estimated Cost	Accumulative Relative Cost
1	Edmonds Ave NE	NE 9 PI	NE 10 St	Left	110	\$ 88,800	\$ 88,800
2	Edmonds Ave NE	NE 10 St	NE 10 PI	Left	105	\$ 61,100	\$ 149,900
3	Talbot Rd S	S 23 St	S 21 St	Right	104	\$ 108,780	\$ 258,680
4	Talbot Rd S	S 23 St	S 21 St	Left	104	\$ 310,800	\$ 569,480
5	Hardie Ave SW	SW Victoria St	SW Victoria St	Right	103	\$ 17,849	\$ 587,329
6	Hardie Ave SW	SW 2 St	SW Victoria St	Right	103	\$ 137,196	\$ 724,525
7	S 21 St	Talbot Rd S	Smithers Ave S	Right	102	\$ 2,406	\$ 726,931
8	Talbot Rd S	Talbot Crest Dr S	S 26 St	Left	102	\$ 44,688	\$ 771,619
9	Edmonds Ave NE	NE 10 PI	Sunset Blvd NE	Left	100	\$ 112,776	\$ 884,395
10	NE 4 St	Duvall Ave NE	Hoquiam Ave NE	Right	100	\$ 223,497	\$ 1,107,892
11	Monroe Ave NE	NE 6 PI	NE 7 PI	Right	99	\$ 34,580	\$ 1,142,472
12	Edmonds Ave NE	NE 5 PI	NE 6 St / Camas Ave NE	Left	99	\$ 80,342	\$ 1,222,814
13	S 21 St	Talbot Rd S	Smithers Ave S	Left	99	\$ 83,472	\$ 1,306,286
14	Edmonds Ave NE	Edmonds Ct NE	NE 5 PI	Left	99	\$ 216,228	\$ 1,522,514
15	Talbot Rd S	S 26 St	Talbot Crest Dr S	Left	99	\$ 310,080	\$ 1,832,594
16	Talbot Rd S	S 27 PI	Talbot Crest Dr S	Left	98	\$ 65,934	\$ 1,898,528
17	Monroe Ave NE	NE 7 PI	NE 7 St	Right	98	\$ 127,099	\$ 2,025,627
18	Hardie Ave SW	SW Harris PI	SW 2 St	Right	98	\$ 140,837	\$ 2,166,464
19	S 21 St	Smithers Ave S	Benson Dr S	Right	98	\$ 191,780	\$ 2,358,244
20	S 21 St	Smithers Ave S	Benson Dr S	Left	98	\$ 383,559	\$ 2,741,803
21	Edmonds Ave NE	Windsor Wy NE	Edmonds Ct NE	Left	97	\$ 15,202	\$ 2,757,005
22	NE 7 St	Kirkland Ave NE	Monroe Ave NE	Left	97	\$ 26,055	\$ 2,783,060
23	Edmonds Ave NE	Edmonds Ct NE	NE 5 PI	Right	97	\$ 85,834	\$ 2,868,894
24	Edmonds Ave NE	NE 4 St	Ferndale Ave NE	Right	97	\$ 113,261	\$ 2,982,155
25	Hardie Ave SW	SW Harris PI	SW 2 St	Left	97	\$ 444,873	\$ 3,427,028
26	NE 4 St	Jericho Ave NE	Niles Ave NE	Left	96	\$ 58,652	\$ 3,485,680
27	Monroe Ave NE	NE 6 St	NE 6 PI	Right	96	\$ 119,080	\$ 3,604,760
28	Edmonds Ave NE	NE 3 St	NE 4 St	Right	96	\$ 166,160	\$ 3,770,920
29	NE 4 St	Jericho Ave NE	Niles Ave NE	Right	95	\$ 195,178	\$ 3,966,098



**Recommended Projects**  
**Comprehensive Walkway Study - 2008**  
**City of Renton**

**Figure**  
**15**

## ALTERNATIVE FUNDING OPTIONS

This study develops an objective system to identify priority walkway projects for the City's annual TIP Walkway Program. The projects identified in Chapter 9 are candidates for the Walkway Program. However, the projects on the list represent less than 1 percent of the total new sidewalk needs of the City, plus sidewalk ramps and existing sidewalk maintenance needs. It is recommended that a variety of alternative funding sources be leveraged to maximize the available Walkway Program funds.

The following funding sources are potentially available to add sidewalk improvements.

### Transportation Improvement Program (Six Year TIP)

- Specific Street Projects
- Walkway Program
- Barrier Free Transition Plan Implementation Program
- CBD Bike & Pedestrian Connections
- Transit Improvement Program
- Street Overlay Program (Shoulder widening)

### Street Maintenance Program

- Sidewalk Repair
- Curb Ramp Repair

### Park Capital Improvement Program/Connectivity

### Board of Public Works Fee-In-Lieu of Required Improvements

### Development Projects

### Sidewalk Local Improvement Districts (LID)

### Transportation Improvement Board (TIB) Grants

- Recommended projects on Arterial streets may be eligible for a TIB Grant

### Other Agency Programs

- WSDOT Safe Routes to School Program
- WSDOT I-405 widening project
- Sound Transit
- King County Metro



## APPENDIX

- A. Pavement Condition Inventory (Example)
- B. Walk to School Route Map text for the reverse side.
- C. 2004 Traffic Flow Map
- D. Application of Project Priority Evaluation System (Sample Only)  
"See APPENDIX (under separate cover) for full documentation"
- E. Sidewalk Street Standards
- F. Opinion of Probable Costs (Cover Letter and Summary Sheets only)  
"See APPENDIX (under separate cover) for full documentation"
- G. Open House Written Comments
- H. Prioritized list of top 200 street segments with missing sidewalks.



## Appendix A

### Pavement Condition Inventory (Example)



Appendix A - Pavement Condition Inventory (Example)

Stn#	Stn# Ex	Street Name	Segment Definition		Side	Length	Width	Lane	Type	Class	Curb	Drainage	Shoulder		Width	Parking	Width	% Complete	Sidewalk		From	To	Ramps	Bikes	Striping	Light	
			From Description	To Description									Type	Type					Condition	Type							
10	20	Aberdeen Ave NE	NE 8 St	NE 7 St	Left	238	28	2	ACP	4	3 CBG	RE	RE	RE	0	0	4	100	2 SWC	Y					BT	Y	
10	20	Aberdeen Ave NE	NE 8 St	NE 7 St	Right	238	28	2	ACP	4	3 CBG	RE	RE	RE	0	0	4	100	2 SWC	Y					BT	Y	
10	30	Aberdeen Ave NE	NE 8 St	NE 9 St	Left	373	26	2	ACP	4	0 CBG	RE	RE	RE	0	0	4	100	2 SWC	Y						Y	
10	30	Aberdeen Ave NE	NE 8 St	NE 9 St	Right	373	26	2	ACP	4	0 CBG	RE	RE	RE	0	0	4	100	2 SWC	Y						Y	
10	40	Aberdeen Ave NE	Sunset Blvd NE	Sunset Blvd NE	Left	258	26	2	ACP	4	4 CBG	RE	RE	RE	0	0	5	100	1 SWC	Y					CSK/FG	Y	
10	40	Aberdeen Ave NE	Sunset Blvd NE	Sunset Blvd NE	Right	258	26	2	ACP	4	6 CBG	VCG	VCG	VCG	8 Y	0	5	60	3 SWC	Y					BT/FG	Y	
10	50	Aberdeen Ave NE	Sunset Blvd NE	NE Park Dr	Left	1250	26	2	ACP	3	0 DH	PV	PV	PV	4 N	0	0	0	0	0	Y					BT/FG	Y
10	50	Aberdeen Ave NE	Sunset Blvd NE	NE Park Dr	Right	1250	26	2	ACP	3	1 DH	RE	RE	RE	0	0	0	0	0	0	Y					BT/FG	Y
10	51	Aberdeen Ave NE	NE 12 St	NE 16 St	Left	665	26	2	ACP	3	2 C	RE	RE	RE	4 N	0	0	0	0	0	Y					BT/FG	Y
10	51	Aberdeen Ave NE	NE 12 St	NE 16 St	Right	1194	28	2	ACP	3	2 C	RE	RE	RE	4 N	0	0	0	0	0	Y					BT/FG	Y
10	60	Aberdeen Ave NE	NE 16 St	NE 20 St	Left	1228	30	2	ACP	3	2 CBG	RE	RE	RE	4 N	0	0	0	0	0	Y					BT/FG	Y
10	70	Aberdeen Ave NE	NE 16 St	NE 20 St	Right	1228	30	2	ACP	3	2 CBG	RE	RE	RE	4 N	0	0	0	0	0	Y					BT/FG	Y
10	80	Aberdeen Ave NE	NE 20 St	NE 24 St	Left	326	34	2	ACP	3	2 CBG	RE	RE	RE	4 N	0	0	0	0	0	Y					BT/FG	Y
10	80	Aberdeen Ave NE	NE 20 St	NE 24 St	Right	326	34	2	ACP	3	2 CBG	RE	RE	RE	4 N	0	0	0	0	0	Y					BT/FG	Y
10	85	Aberdeen Ave NE	NE 24 St	NE 28 St	Left	916	27	2	ACP	3	2 CBG	RE	RE	RE	4 N	0	0	0	0	0	Y					BT/FG	Y
10	85	Aberdeen Ave NE	NE 24 St	NE 28 St	Right	916	27	2	ACP	3	2 CBG	RE	RE	RE	4 N	0	0	0	0	0	Y					BT/FG	Y
10	90	Aberdeen Ave NE	NE 27 St	NE 31 St	Left	1005	27	2	ACP	3	2 CBG	RE	RE	RE	4 N	0	0	0	0	0	Y					BT/FG	Y
10	90	Aberdeen Ave NE	NE 27 St	NE 31 St	Right	1005	27	2	ACP	3	2 CBG	RE	RE	RE	4 N	0	0	0	0	0	Y					BT/FG	Y
10	100	Aberdeen Ave NE	NE 28 St	NE 32 St	Left	287	26	2	ACP	4	0 C	GR	GR	GR	2	0	0	0	0	0	Y					BT/FG	Y
10	100	Aberdeen Ave NE	NE 28 St	NE 32 St	Right	287	26	2	ACP	4	0 C	GR	GR	GR	2	0	0	0	0	0	Y					BT/FG	Y
10	130	Aberdeen Ave NE	NE 33 St	NE 37 St	Left	439	33	2	ACP	4	5 CBG	VCG	VCG	VCG	0 Y	0	5	100	3 SWC	Y						Y	
10	130	Aberdeen Ave NE	NE 33 St	NE 37 St	Right	439	33	2	ACP	4	5 CBG	VCG	VCG	VCG	0 Y	0	5	100	3 SWC	Y						Y	
10	140	Aberdeen Ave NE	NE 35 St	NE 39 St	Left	283	33	2	ACP	4	5 CBG	VCG	VCG	VCG	0 Y	0	5	100	3 SWC	Y						Y	
10	140	Aberdeen Ave NE	NE 35 St	NE 39 St	Right	283	33	2	ACP	4	5 CBG	VCG	VCG	VCG	0 Y	0	5	100	3 SWC	Y						Y	
10	140	Aberdeen Ave NE	NE 35 St	NE 39 St	Left	227	30	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
10	140	Aberdeen Ave NE	NE 35 St	NE 39 St	Right	227	30	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
20	10	Aberdeen Ave SE	SE 21 St	SE 25 St	Left	155	30	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
20	10	Aberdeen Ave SE	SE 21 St	SE 25 St	Right	155	30	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
20	20	Aberdeen Ave SE	SE 21 St	SE 25 St	Left	141	30	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
20	20	Aberdeen Ave SE	SE 21 St	SE 25 St	Right	141	30	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
20	40	Aberdeen Ave SE	Aberdeen Pl SE	Aberdeen Pl SE	Left	447	30	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
20	40	Aberdeen Ave SE	Aberdeen Pl SE	Aberdeen Pl SE	Right	447	30	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
20	40	Aberdeen Ave SE	Aberdeen Pl SE	Aberdeen Pl SE	Left	280	26	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
20	40	Aberdeen Ave SE	Aberdeen Pl SE	Aberdeen Pl SE	Right	280	26	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
20	50	Aberdeen Ave SE	SE 19 St	SE 23 St	Left	313	30	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
20	50	Aberdeen Ave SE	SE 19 St	SE 23 St	Right	313	30	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
30	10	Aberdeen Ave SE	SE 22 St	SE 26 St	Left	143	26	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
30	12	Aberdeen Ave SE	SE 22 St	SE 26 St	Right	143	26	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
30	12	Aberdeen Ave SE	SE 22 St	SE 26 St	Left	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	5	100	3 SWC	Y						Y	
30	12	Aberdeen Ave SE	SE 22 St	SE 26 St	Right	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	5	100	3 SWC	Y						Y	
35	10	Aberdeen Ave SE	SE 21 St	SE 25 St	Left	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	5	100	3 SWC	Y						Y	
35	10	Aberdeen Ave SE	SE 21 St	SE 25 St	Right	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	5	100	3 SWC	Y						Y	
35	20	Aberdeen Ave SE	SE 21 St	SE 25 St	Left	613	30	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
35	20	Aberdeen Ave SE	SE 21 St	SE 25 St	Right	613	30	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
40	10	Aberdeen Ave SE	Aberdeen Pl SE	Aberdeen Pl SE	Left	473	76	7	ACP	1	5 CBG	VCG	VCG	VCG	4 N	0	5	100	3 SWC	Y						Y	
40	10	Aberdeen Ave SE	Aberdeen Pl SE	Aberdeen Pl SE	Right	473	76	7	ACP	1	5 CBG	VCG	VCG	VCG	4 N	0	5	100	3 SWC	Y						Y	
50	10	Aberdeen Ave SE	Rolling Hills Ave SE	Rolling Hills Ave SE	Left	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	10	Aberdeen Ave SE	Rolling Hills Ave SE	Rolling Hills Ave SE	Right	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	20	Aberdeen Ave SE	SE 21 St	SE 25 St	Left	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	20	Aberdeen Ave SE	SE 21 St	SE 25 St	Right	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Left	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Right	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Left	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Right	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Left	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Right	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Left	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Right	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Left	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Right	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Left	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Right	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Left	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Right	143	33	2	ACP	4	6 CBG	VCG	VCG	VCG	0 Y	0	4	100	3 SWC	Y						Y	
50	30	Aberdeen Ave SE	SE 21 St	SE 25 St	Left	143	33	2	ACP	4	6 CBG	VCG</															



## **Appendix B**

### **Text for the Back of the Walk to School Routes Map and Supporting Information**





## Text for the Back of the Walk to School Routes Map

### INTRODUCTION

The City of Renton Transportation Systems Division with the Renton School District has prepared this map as a walking guide for elementary school children. This map is intended to illustrate a recommended walking route for your child to use when walking to and from school. Some recommended walking routes require walking a longer distance than the most direct route. Even though your neighborhood may lack sidewalks at this time, we feel this map will help your child find the best walking route to school. The home to school route is shown on the map.

**DESCRIPTION OF MAP** - This map basically shows two types of walking routes.

1.  This indicates existing sidewalks or walking areas adjacent to a roadway.
2.  This indicates routes where major sidewalks may not presently exist. Walking on the left hand side of the roadway facing the oncoming traffic is recommended where there are no sidewalks.

This map also shows marked school crosswalks, other safety facilities available for your child's use, such as locations of school patrol crossing guards, all way stop sign locations and traffic signals on the edge of the walking area for the Highlands Elementary School. These are indicated on the other side.

### PARENT RESPONSIBILITY

It is your responsibility as a parent to assist us in teaching your child his/her walking route to and from school. We suggest all parents familiarize themselves with the route recommended for their child; walk the route with them, answering any questions they may have concerning the map, pointing out such traffic control features as crossing guards, signals, etc., on their route to school. ***Please keep this map in your home and go over it with your child from time to time to make sure that (s)he knows and uses the walk to school route.***

### STANDARD SAFETY TIPS

1. Where no walking area exists, walk on the left side of the roadway facing on-coming traffic to and from school (map only shows home to school route).
2. Obey the instructions of your school patrol, and cross only after receiving direction from him/her.
3. When available, cross only at marked crosswalks and **WALK, DO NOT RUN**, while in the crosswalk area.
4. Before crossing any street, stop and look both ways for oncoming traffic. Make eye contact with drivers of vehicles before crossing a street.
5. Cross only at safe corners, even if you walk further.
6. Watch for turning cars and cars backing out of driveways.
7. Keep from between parked cars.

8. When crossing at a traffic signal (none required at Highlands Elementary School), be sure to **press the pedestrian walk** button if available, and wait for the signal indication and traffic to stop before entering the street area. Flashing "DON'T WALK" means **do not begin to walk**; however, if you are already crossing the street you may continue walking (**DO NOT RUN**). After the "WALK" signal, there is adequate time to allow the average pedestrian to continue walking across the street before oncoming traffic receives a green light.
9. Refuse to ride with strangers.
10. Go directly between home and school (or from school to home) by the recommended route.

### **Partnership for School Pedestrian Safety**

Pedestrian safety for school children is not just the responsibility of the school. Everyone in the community has a critical role.

- The student – personal responsibility – child must understand and follow the instructions given for walking to and from school.
- The parent – influence child's attitudes towards obeying safety rules – can show child the routes to and from school.
- The driver – pedestrians have the right of way in any crosswalk marked or not marked; must use extreme caution in school zones and along the route to school.
- The school – responsible for overseeing school walk routes; taking an active part in the training and use of crossing guards; distributing walk route maps to parents and students annually.
- The school district – responsible for siting and developing school facilities that foster a good walking environment.
- The City of Renton transportation– the City is responsible for designing, installing and maintaining pedestrian facilities and traffic signals.
- The City of Renton police – enforce speed limits on all streets and behaviors in school zones.

### **Existing Walking Conditions Inventory**

A school walk route map recommends a walking route to the school based on traffic patterns and existing traffic controls such as cross walks, traffic lights, or school safety patrol posts. We conduct a field inventory to assess existing pedestrian information, including:

- School location and walking boundaries
- Location of stop signs and yield signs
- Location and type of school zone signage

- Traffic signal timing and phasing for pedestrian crossings
- Location of marked crosswalks and pedestrian signals
- Number of lanes on the roadway
- School parking areas
- Posted speed limits
- Crossing guard locations
- Sidewalks, pedestrian paths, and shoulders
- Condition and width of sidewalks and shoulders
- Shoulder material (paved, gravel, grass, non-existent)
- Distances of walkway from traffic
- Bicycle lanes or paths
- Other relevant pedestrian safety factors observed in the field – potentially dangerous dogs; areas with history of illegal activity; location of known sex offenders
- Major sight obstructions (children's eye level)
- High accident locations
- Identify high volume streets
- Identify streets with heavy truck traffic

### **Guidelines for Selecting Specific Walk Routes**

The objective in the selection of a school walk route is to minimize roadside and roadway crossing conflicts to the extent possible. These guidelines were used to help make decisions about the walk routes.

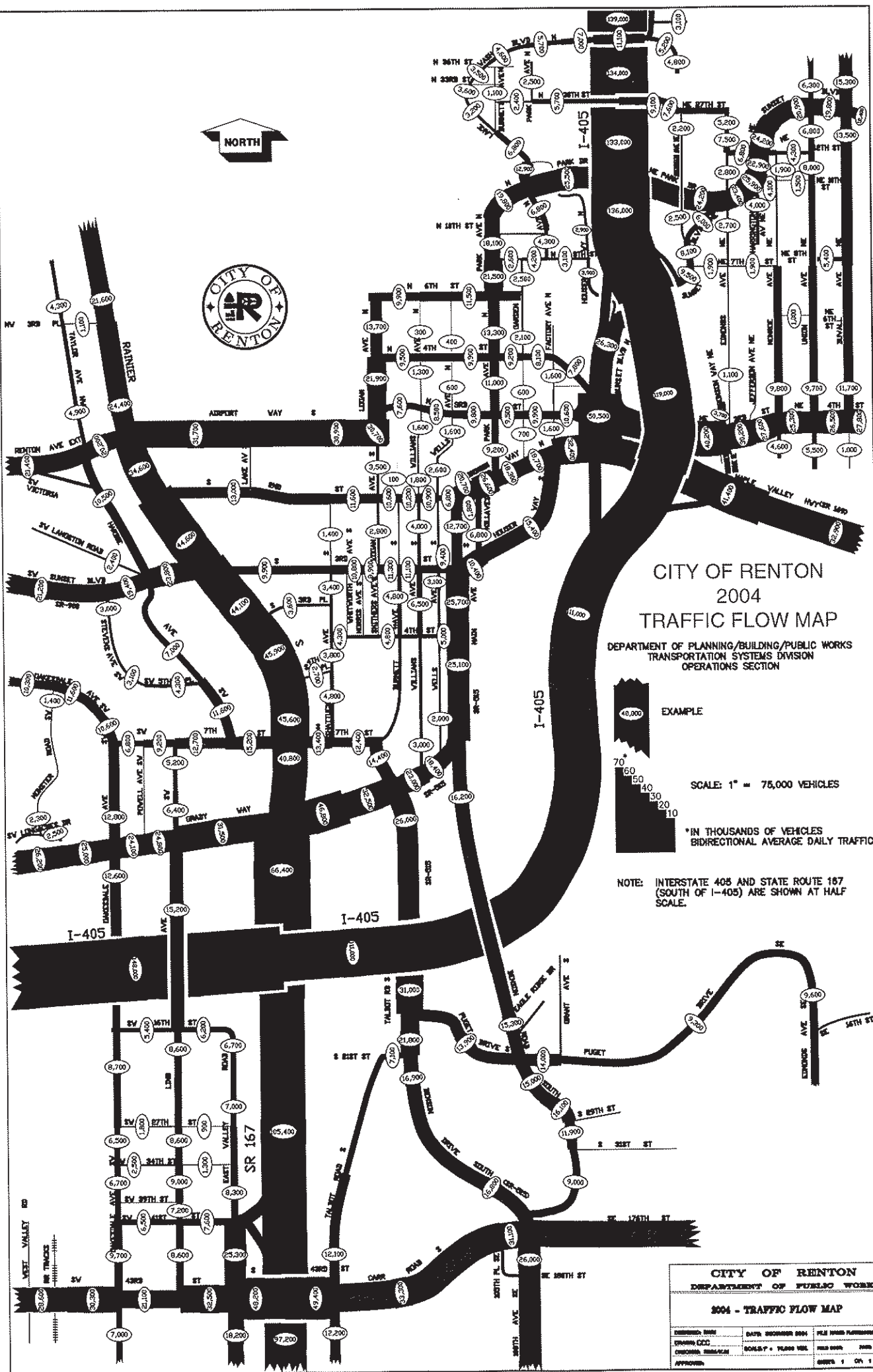
- Develop walk routes that form children into groups of larger numbers so they cross streets together. Group children along school routes for better visibility and driver awareness (especially for street crossings – groups are safer)
- Select routes that use sidewalks or paths where available.
- Walk the shortest distance possible on streets without sidewalks or wide shoulders

- Select the safest roads – direct the walk route along the roads with the slowest speeds, the lowest traffic volumes, and the least number of trucks.
- Maximize the use of existing pedestrian crossings and crossing protection (existing stop signs, marked crosswalks, traffic signals, et al)
- Select the safest crossing locations – choose locations that offer the lowest traffic speeds and volumes; the least amount of heavy truck traffic; and the best sight distance. (a place free from shrubs, parked cars, or other obstacles that could interfere with students view of traffic and the driver's view of the students)
- Limit the number of crossings within the school zone - fewer crossings mean less conflicts with traffic.
- Avoid mid-block crossings – use only if signalized or supervised by an adult member of the school patrol.
- Consider hours of darkness and inclement weather. If children will be walking routes during dark hours, find streets that offer lighting.

## Appendix C

### 2004 Traffic Flow Map





CITY OF RENTON		
DEPARTMENT OF PUBLIC WORKS		
2004 - TRAFFIC FLOW MAP		
DATE: DECEMBER 2004	FILE: 1000000000	
CHIEF: CEC	DESIGN: P	FILE: 0000
APPROVED:	DATE: 1	BY: 1

C-1



## Appendix D

### Application of Project Priority Evaluation System (Sample Only)

**"See APPENDIX (under separate cover) for full documentation"**



Appendix D - Application of Project Priority Evaluation System (Sample Only)

St#	Sq#	Street Name	From Description	To Description	Side	Length	% Completed	Volume	Pedestrian Safety Factor	Pedestrian Attractions										Distance from Site Specific Attraction					Availability of Alternative Walkways	Availability of Existing Street Right of Way	Total Points			
										Schools	Senior Citizen Center and Housing/Social Service Agency/Disabled	Hospitals	Transit Centers and Bus Stops	Parks	Arterial Streets	High Density Residential Neighborhoods	Urban Center North	Urban Center Downtown	Commercial/Mixed Use	Commercial Neighborhood	Elementary	Middle School	High School	Senior Center	Bus Stop	Park	Relative Cost			
10	40	Aberdeen Ave NE	NE 9 St	Sunset Blvd NE	Left	258	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	10	32 1693
10	50	Aberdeen Ave NE	Sunset Blvd NE	NE Park Dr	Left	1250	60	2666	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	10	10	48 1062
10	50	Aberdeen Ave NE	Sunset Blvd NE	NE Park Dr	Right	1250	0	2666	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	44 1281
10	51	Aberdeen Ave NE	NE Park Dr	NE 12 St	Left	665	0	2662	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	54 845
10	51	Aberdeen Ave NE	NE Park Dr	NE 12 St	Right	665	0	2662	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	54 846
10	60	Aberdeen Ave NE	NE 12 St	NE 16 St	Left	1194	0	2682	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	39 1503
10	60	Aberdeen Ave NE	NE 12 St	NE 16 St	Right	1194	0	2682	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	39 1504
10	70	Aberdeen Ave NE	NE 16 St	NE 20 St	Left	1228	0	2682	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	49 1057
10	70	Aberdeen Ave NE	NE 16 St	NE 20 St	Right	1228	0	2682	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	49 1058
10	80	Aberdeen Ave NE	NE 20 St	NE 24 St	Left	326	0	2682	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	49 1053
10	80	Aberdeen Ave NE	NE 20 St	NE 24 St	Right	326	0	2682	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	49 1053
10	85	Aberdeen Ave NE	NE 21 St	NE 24 St	Left	916	10	2682	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	64 488
10	85	Aberdeen Ave NE	NE 21 St	NE 24 St	Right	916	50	2682	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	64 488
10	90	Aberdeen Ave NE	NE 24 St	NE 27 St	Left	1005	0	2682	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	84 78
10	90	Aberdeen Ave NE	NE 24 St	NE 27 St	Right	1005	0	2682	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	84 78
10	90	Aberdeen Ave NE	NE 27 St	NE 28 St	Left	287	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	84 79
10	100	Aberdeen Ave NE	NE 27 St	NE 28 St	Right	287	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	57 687
10	100	Aberdeen Ave NE	Rolling Hills Ave SE	End N	Left	143	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	47 1113
30	12	Aberdeen Ct SE	Rolling Hills Ave SE	End N	Right	143	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	31 1769
30	12	Aberdeen Ct SE	Rolling Hills Ave SE	End N	Left	143	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	21 1900
60	3	Anacortes Ave NE	End Admin	NE 9 St	Right	27	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	27 1791
60	3	Anacortes Ave NE	End Admin	NE 9 St	Left	27	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	27 1791
60	100	Anacortes Ave NE	Bremerton Ave NE	NE 23 St	Right	159	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	52 883
60	110	Anacortes Ave NE	NE 23 Ct	NE 24 St	Right	285	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	72 271
60	120	Anacortes Ave NE	NE 24 St	NE 25 Ct	Right	288	30	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	46 1227
70	10	Anacortes Ave SE	SE 4 Pl	SE 4 St	Left	290	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	51 1017
70	10	Anacortes Ave SE	SE 4 Pl	SE 4 St	Right	290	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	51 1018
70	10	Anacortes Ave SE	SE 4 Pl	SE 3 Pl	Left	290	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	41 1467
70	20	Anacortes Ave SE	SE 4 St	SE 3 Pl	Right	290	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	41 1467
90	10	Bagley Pl SW	Langston Rd SW	Langston Pl SW	Left	157	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	51 1007
90	10	Bagley Pl SW	Langston Rd SW	Langston Pl SW	Right	157	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	51 1007
95	10	Beacon Coal Mine Rd	Monster Rd SW	Cl N	Left	860	0	1500	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	48 1072
95	10	Beacon Coal Mine Rd	Monster Rd SW	Cl N	Right	860	0	1500	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	48 1072
100	10	Beacon Wy S	End S	S 7 St	Left	1431	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	38 1510
100	10	Beacon Wy S	End S	S 7 St	Right	1431	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	38 1510
100	20	Beacon Wy S	S 7 St	S 6 Pl	Left	194	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	37 1623
100	20	Beacon Wy S	S 7 St	S 6 Pl	Right	194	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	37 1623
100	25	Beacon Wy S	S 6 Pl	High Ave S	Left	222	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	37 1533
100	25	Beacon Wy S	S 6 Pl	High Ave S	Right	222	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	37 1533
110	30	Beacon Wy SE	End S	Grant Ave S	Left	463	50	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	37 1539
110	30	Beacon Wy SE	End S	SE 18 Pl	Right	463	50	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	37 1539
110	20	Beacon Wy SE	SE 18 Pl	SE 16 St	Left	688	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	57 755
110	20	Beacon Wy SE	SE 16 Pl	End N	Left	1200	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	57 772
110	30	Beacon Wy SE	SE 16 St	End N	Right	315	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	32 1699
120	47	Benson Dr S / SR 515	CI Admn	SE 172 St	Left	318	80	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	46 1201
120	47	Benson Dr S / SR 515	CI Admn	SE 172 St	Right	318	0	8244	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	40 1487
120	47	Benson Dr S / SR 515	CI Admn	SE 172 St	Right	318	0	8244	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	10	30 1788



## Appendix E

### Sidewalk Street Standards



#### 4-6-060 STREET STANDARDS:

##### A. PURPOSE:

It is the purpose of this Code to establish design standards and development requirements for street improvements to insure reasonable and safe access to developed properties. These improvements include sidewalks, curbs, gutters, street paving, monumentation, signage and lighting. (Ord. 4521, 6-5-1995)

##### B. ADMINISTERING AND ENFORCING AUTHORITY:

The Administrator of the Department of Planning/Building/Public Works and/or his/her designated representatives are responsible for the general administration and coordination of this Code.

##### C. APPLICABILITY:

Whenever a permit is applied for under the provisions of the Uniform Building Code for new construction, or application made for a short plat or a full subdivision which is located on a property adjacent to public right-of-way, then the person applying for such building permit shall build and install certain street improvements, including, but not limited to: lighting on all adjacent rights-of-way, and all private street improvements on access easements. The minimum design standards for streets are listed in the following tables. These standards will be used as guidelines for determining specific street improvement requirements for development projects, including short plats and subdivisions.

##### F. PUBLIC STREET AND SIDEWALK DESIGN STANDARDS:

**1. Level of Improvements:** The minimum level of street improvements required depends upon the project size as listed in the following table. The project sizes listed shall be for square footage of new building and/or addition to existing buildings, number of units for apartments, or total number of final lots in the proposed plat or short plat.

**2. Minimum Standards:** All such improvements shall be constructed to the City Standards for Municipal Public Works Construction. Standards for construction shall be as specified in the following tables, and by the Administrator or his/her duly authorized representative.

###### a. PUBLIC STREET IMPROVEMENT REQUIREMENTS FOR PRIVATE DEVELOPMENT:

PROJECT SIZE	RIGHT-OF-WAY WIDTH	PAVEMENT WIDTH	SIDEWALKS AND STREET LIGHTING	DISTANCE TO ARTERIAL
2 – 4 units residential 0 – 5,000 sq. ft. commercial 0 – 10,000 sq. ft. industrial	As determined by subsection F2 of this Section.	Provide half pavement width per standard plus minimum 10' – curb required on project side.	Provide sidewalk on project side. No street lighting required.	Minimum 20' pavement to arterial (500' maximum).

5 – 20 residential lots 5,000 – 10,000 sq. ft. commercial 10,000 – 20,000 sq. ft. industrial	As determined by subsection F2 of this Section.	Provide full pavement width per standard – curb required on project side.	Provide sidewalk on project side. Street lighting required on project side.	Minimum 20' pavement to arterial (500' maximum).
More than 20 units residential 10,000 sq. ft. commercial 20,000 sq. ft. industrial	As determined by subsection F2 of this Section.	Provide full pavement width per standard – curb required on project side.	Provide sidewalk on project side. Street lighting required on project side.	Minimum 20' pavement and pedestrian walkway to arterial.

b. MINIMUM DESIGN STANDARDS FOR RESIDENTIAL ACCESS STREETS:

RIGHT-OF-WAY WIDTH	PAVEMENT	SIDEWALKS	OTHER
50'	32' paved Parking both sides	6' sidewalk adjacent to curb both sides	Combined public detention Street lighting

c. MINIMUM DESIGN STANDARDS FOR COLLECTOR STREETS:

RIGHT-OF-WAY WIDTH	PAVEMENT	SIDEWALKS	OTHER
60'	36' paved Parking both sides	5' sidewalks and 5' planting strip on both sides	Combined public detention Street lighting

d. MINIMUM DESIGN STANDARDS FOR COMMERCIAL ACCESS STREETS:

RIGHT-OF-WAY WIDTH	PAVEMENT	SIDEWALKS	OTHER
60'	40' paved	5' sidewalks on the property line	Combined public detention Street lighting

e. MINIMUM DESIGN STANDARDS FOR INDUSTRIAL ACCESS STREETS:

RIGHT-OF-WAY WIDTH	PAVEMENT WIDTH	SIDEWALKS	OTHER
66'	44' paved	5' sidewalks and 5' planting strip on both sides	Combined public detention Street lighting

**3. Length of Improvements:** Such improvements shall extend the full distance of such property to be improved upon and sought to be occupied as a building site or

parking area for the aforesaid building of platting purposes and which may adjoin property dedicated as a public street.

**4. Special Design Standards for Arterial Streets:** Arterial street rights-of-way shall be sixty feet (60') to one hundred fifty feet (150') in width as may be required by the Administrator or his/her designee. The design standards for arterial streets will be established on a case-by-case basis by the Administrator or his/her designee in accordance with the major arterials and streets plan.



## Appendix F

### Opinion of Probable Costs (Disclaimer and Summary Sheets only)

"See APPENDIX (under separate cover) for full documentation"



### **Opinion of Probable Costs**

At the request of the Client this opinion was based only on the general type and nature of the project. A schematic layout of improvements was not prepared nor were construction plans available. Extensive assumptions had to be made in arriving at what amounts to an "educated guess". Because of this, the Consultant makes no guarantee or warranty, expressed or implied, as to the accuracy of this opinion of probable construction cost.

Triad Associates, Inc. provided updated unit costs for the cost estimates. Mirai has applied the unit costs to the appropriate estimated quantities for each sidewalk section to arrive at an estimated cost per linear foot. The following notes apply to all cost estimates in this report:

This opinion of probable construction cost has been prepared in order to provide the client with an approximation of costs for the specific categories shown, given the information available to the consultant at the time the opinion was prepared. When the Client requires a more definitive cost estimate, it is recommended that actual construction bids be obtained from qualified construction contractors.

To prepare a programmatic cost estimate, the study team applied one of two estimates to each street segment needing sidewalks in the City. An average of Sections A and B at \$151 per lineal foot was applied if the inventory showed existing curb and gutter and no underground drainage is required. An average of Sections C, D and E at \$589 per lineal foot was applied if the inventory showed underground drainage would likely be required. The use of the average costs allowed for a programmatic cost estimate to identify the approximate size of the program. Application of these cost estimates does not imply the need for, or desirability of, the details on any sidewalk section on any given street segment.

When developing the recommended project list, it was assumed that only one side of a given street segment would be constructed to a full sidewalk length, and it would be the least expensive side of the street. Exceptions included segments where there were already full sidewalks on one side and the segment was identified as a high priority sidewalk for the other side. Arterial streets, transit routes and segments close to schools and the other identified pedestrian attractions are examples.

Projects selected for consideration for funding were reviewed for budgeting purposes. The appropriate estimate from Figure 13 or 14 (Sidewalk Sections A-E) was applied to a specific project site with appropriate adjustments for project specific issues to develop a pre-design budget estimate.

The unit prices contained in this opinion are based upon the Consultant's most recent experience with bids that have been made on other projects. Conditions vary from project to project, and in addition, prices may change for a given project due to shifts in supply and demand. Because of these factors, the Consultant does not guarantee or warrant the accuracy of the unit prices shown.

This opinion of probable construction cost has been prepared in order to provide the client with an approximation of costs for the specific categories shown, given the information available to the consultant at the time the opinion was prepared. The Consultant makes no guarantee or warranty, expressed or implied, that the total scope of the development effort has been included in this opinion. The Client is urged to budget contingency funds to account for unforeseen project conditions and other factors outside the scope of the information available at this time.

When the Client requires a more definitive cost estimate, it is recommended that actual construction bids be obtained from qualified construction contractors.

## Appendix G

### Open House Written Comments

1





# **Welcome to the 2007 Comprehensive Walkway Study Open House**

The study tackled a number of tasks:

- Updated the City's existing sidewalk inventory
- Prepared an example "Walk to School Route Map"
- Identified gaps in the walkway system
- Identified key walkway centers
- Revised the priority evaluation criteria for pedestrian improvements to include a 'primary walk to school route' criteria
- Identified design guidelines, cost estimates and recommendations for walkway construction

This Open House is an opportunity for members of the community and local businesses to provide input on the walkway study. Walk around the room and learn about our ideas and share yours about the walkway system and pedestrian access in the City. Your participation will help make decisions that will help prioritize projects for funding and construction.

For more information or comments:

Dan Hasty, Project Manager, Public Works Engineering  
City of Renton | 425-430-7246 | [jhasty@ci.renton.wa.us](mailto:jhasty@ci.renton.wa.us)



# City of Renton

## Comprehensive Walkway Study Open House

February 26, 2008 --- Attendance Sign-In Sheet

Name	Address	Phone/e-mail
BOB GEVERS	900 KIRKLAND AVENUE	602 GEVERS@LINO.9000 425-255-8816
NICOLA ROBINSON	3110 SE 5th St, Renton	425 255-5160
SUZANNE THOMPSON	4777 Delmar Ave NE	425-255-1100
ALICE SIMMONS	4437 4th Ave S, Seattle	931-235-0000
Sally Daniels	2nd Garden Ave N	9165 Saldanhe (Canada)
Lee Ann Peterson	406 Burnett Ave W	98057 poplar@everett.org
NORRIS CAROL ABRAHAMSON	3408 NE 17th St	98052 425-255-1003
Christopher Wagner	11002 SE 176th St, B201	98055
James Phillips	1000 1st Ave S	425-255-1376
STEPHANIE VAKINADORE	2307 NE 8th Rd, Renton	425-255-4444
Kim's Simonson	1133 Lake WA Blvd N #F208	98066 EDNSP TOLSON
NATE JONES	2106 SE 20th COURT RENTON	98055
Catherine Plouffe-Smith	402 S. Town St - Renton	425-255-1697
Julie Reavis	6300 Southcenter Blvd, Suite 100	Tukwila, WA 98188 jreavis@cityofrenton.wa.us 206-431-3659



# Comprehensive Walkway Study Comments

Several boards are shown around the room. Using the names and/or locations of the projects as they appear, let us know if we missed any gaps in the walkway system or key walkway centers. We have identified a set of prioritized projects. List the three projects that are most important to you.

## Missing Gaps in the Walkway System?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

## Any Key Walkway Centers Missing?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

## My 3 Most Important Walkway Projects

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Please write any other comments you have for us below, or contact Dan Hasty if you have more to say.

SIDE WALK HARDLY LIFTED DUE TO  
THE TREES IN FRONT OF RUM DELICIOUS  
RESTAURANT.  
Name  
HARRAMON

You can leave your comments with any staff member at the Open House or mail to:

Dan Hasty Project Manager  
Renton City Hall - 5th Floor  
1055 South Grady Way  
Renton, WA 98055



# Comprehensive Walkway Study Comments

Several boards are shown around the room. Using the names and/or locations of the projects as they appear, let us know if we missed any gaps in the walkway system or key walkway centers. We have identified a set of prioritized projects. List the three projects that are most important to you.

## Missing Gaps in the Walkway System?

1. PUGET DRIVE SE (GRANT TO FOMMERS)
2. TALBOT ROAD (BUTTER 515 & S. 26TH)
3. S. 18TH ST. (EAGLE RIDGE & S. 11TH AV)

## Any Key Walkway Centers Missing?

- 1.
- 2.
- 3.

## My 3 Most Important Walkway Projects

- 1.
- 2.
- 3.

Please write any other comments you have for us below, or contact Dan Hasty if you have more to say.

DEVELOPERS SHOULD BE REQUIRED TO PUT  
IN SIDEWALKS AS PART OF THEIR  
DEVELOPMENT AND ONLY UNDER  
SPECIAL COUNCIL AUTHORIZATION BE ALLOWED  
TO DEFER OR PAY FEE IN LIEU OF  
PUTTING IN SIDEWALKS.

MORE REMODEL PROJECTS (- CERTAIN \$ VALUE)  
MUST ALSO TRIGGER SIDEWALK REPAIR/IMPROVEMENTS.

You can leave your comments with any staff member at the Open House or mail to:

Dan Hasty Project Manager  
Renton City Hall - 5th Floor  
1055 South Grady Way  
Renton, WA 98055



# Comprehensive Walkway Study Comments

Several boards are shown around the room. Using the names and/or locations of the projects as they appear, let us know if we missed any gaps in the walkway system or key walkway centers. We have identified a set of prioritized projects. List the three projects that are most important to you.

## Missing Gaps in the Walkway System?

1. S Tobin St between Lake Ave S and Shattuck Ave S

2. \_\_\_\_\_

3. \_\_\_\_\_

## Any Key Walkway Centers Missing?

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

## My 3 Most Important Walkway Projects

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Please write any other comments you have for us below, or contact Dan Hasty if you have more to say.

The listed missing gap is near a food bank along a street  
that has approximately 90% sidewalk on the mentioned  
side. Please check if this sidewalk meets requirements  
to receive points as a missing link.

You can leave your comments with any staff member at the Open House or mail to:

Dan Hasty Project Manager  
Renton City Hall - 5th Floor  
1055 South Grady Way  
Renton, WA 98055



## Appendix H

### Prioritized list of top 200 street segments with missing sidewalks



Appendix H - Prioritized list of top 200 street segments with missing sidewalks

Appendix H - Prioritized list of top 200 street segments with missing sidewalks										Pedestrian Attractions										Distance from Site Specific Attraction										Availability of Existing Street Right of Way																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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## Appendix H - Prioritized list of top 200 street segments with missing sidewalks

[illegible]

H-2

Appendix H - Prioritized list of top 200 street segments with missing sidewalks

Stn#	Stn#	Street Name	From Description	To Description	Side	Length	% Completed	Volume	Pedestrian Safety Factor	Schools	Senior Citizen Center and Housing/Social	Hospitals	Transit Centers and Bus Stops	Parks	Arterial Streets	High Density Residential Neighborhoods	Urban Center-North	Urban Center Downtown	Commercial/Mixed Use	Commercial Neighborhood	Missing Link	Distance from Site Specific Attraction	Relative Cost	Availability of Existing Street Right of Way	Availability of Alternative Walkways	Total Points
2075	30	Union Ave SE	SE 3 Pl	SE 2 Pl	Right	655	0	6642	4	0	0	0	0	0	0	0	0	0	0	0	10	0	5	10	10	82
1880	201	Shelton Ave NE / 130 Ave SE	NE 23 Pl	NE 22 Pl	Left	270	0	500	1	15	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	32
630	15	Glenwood Ave NE	Harrington Ave NE	Sunset Ln NE	Right	282	0	500	1	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	108
430	95	Duvall Ave NE	NE 18 Pl	NE 18 St	Left	307	0	15639	16	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	82
2020	40	Taylor Ave NW	NW 3 St	NW 3 Pl	Left	322	0	5050	6	10	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	82
1790	20	N Riverside Dr	Williams Ave N	Wells Ave N	Left	466	20	500	1	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	112
430	80	Duvall Ave NE	NE 21 St	NE 23 St	Right	464	0	15639	16	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	82
2930	20	NE 9 Pl	Edmonds Ave NE	Glenwood Ave NE	Left	611	25	500	1	10	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	114
945	21	Jericho Ave NE	NE 2 St	NE 2 Ct	Left	573	0	500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	82
2403	10	SE 2 Pl	Lyons Ave SE	Jerico Ave SE	Left	671	0	5400	6	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	116
2910	120	NE 8 St	Vashon Pl NE	Bremerton Ave NE	Left	722	0	500	1	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	82
730	170	Harrington Ave NE	NE 16 St	Index Ave NE	Right	961	0	500	1	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	118
880	60	Index Ave NE	NE 13 St	Harrington Ave NE	Left	1997	50	25008	26	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	122
1590	10	NE Park Dr / SR 900	Ramp	Edmonds / Sunset Blvd NE	Right	1997	50	25008	26	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	122
1590	10	NE Park Dr / SR 900	Ramp	Edmonds / Sunset Blvd NE	Right	222	90	500	1	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	120
2760	70	NE 6 Pl	Index Ave NE	Index Pl NE	Left	345	80	15639	16	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	120
430	60	Duvall Ave NE	NE 18 St	NE 19 St	Left	723	90	500	1	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	125
2070	20	S Tobin St	Lake Ave S	Shattuck Ave S	Left	173	40	500	1	0	10	0	0	0	0	0	0	0	0	0	0	0	10	10	10	125
1492	100	Naches Ave SW	SW Sunset Blvd	79 Ave S	Right	361	50	500	1	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	125
2910	20	NE 8 St	Harrington Ave NE	Index Pl NE	Left	158	70	14885	15	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	126
430	20	Duvall Ave NE	SE 12 St	NE 8 St	Left	233	0	500	1	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	127
3050	10	NE 11 St	Harrington Pl NE	Sunset Ln NE	Left	237	0	500	1	0	15	0	0	0	0	0	0	0	0	0	0	0	10	10	10	128
1880	20	Shelton Ave NE	NE 6 Ct	NE 7 St	Left	991	75	20000	21	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	130
0	0	Logan Ave N	NE 10 St	Park Ave N	Right	281	0	500	1	0	15	0	0	0	0	0	0	0	0	0	0	0	10	10	10	131
1740	30	Redmond Ave NE	NE 27 Ct	NE 9 Ct / W	Left	318	0	500	1	0	10	0	0	0	0	0	0	0	0	0	0	0	10	10	10	132
950	50	Jones Ave NE	NE 27 Ct	NE 28 St	Left	384	0	500	1	0	10	0	0	0	0	0	0	0	0	0	0	0	10	10	10	133
2170	30	S Victoria St	Rainier Ave S / SR 167	Lake Ave S	Right	385	0	500	1	0	15	0	0	0	0	0	0	0	0	0	0	0	10	10	10	134
1740	20	Redmond Ave NE	NE 7 St	NE 8 Ct	Left	684	15	500	1	0	10	0	0	0	0	0	0	0	0	0	0	0	10	10	10	135
790	10	Hayes Pl SW	Rainier Ave S	Renton Ext	Left	664	15	500	1	0	10	0	0	0	0	0	0	0	0	0	0	0	10	10	10	136
790	10	Hayes Pl SW	Rainier Ave S	Renton Ext	Right	664	15	500	1	0	10	0	0	0	0	0	0	0	0	0	0	0	10	10	10	137
1550	81	Oakdale Ave SW	SW 7 St	Mile Post - 7408	Left	813	20	10309	11	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	138
1740	10	Redmond Ave NE	NE 6 Pl	NE 7 St	Right	745	0	500	1	0	15	0	0	0	0	0	0	0	0	0	0	0	10	10	10	139
0	0	Logan Ave N	NE 10 St	Park Ave N	Left	991	0	20000	21	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	140
3060	200	NE 12 St	Shelton Ave NE	NE 11 Pl	Left	274	0	4932	5	0	10	0	0	0	0	0	0	0	0	0	0	0	10	10	10	141
3060	200	NE 12 St	Shelton Ave NE	NE 11 Pl	Right	274	0	4932	5	0	10	0	0	0	0	0	0	0	0	0	0	0	10	10	10	142
3060	190	NE 12 St	Redmond Ave NE	Shelton Ave NE	Right	441	0	4932	5	0	10	0	0	0	0	0	0	0	0	0	0	0	10	10	10	143
3060	210	NE 12 St	NE 11 Pl	Union Ave NE	Left	449	0	4681	5	0	10	0	0	0	0	0	0	0	0	0	0	0	10	10	10	144
3060	210	NE 12 St	NE 11 Pl	Union Ave NE	Right	449	0	4681	5	0	10	0	0	0	0	0	0	0	0	0	0	0	10	10	10	145
2860	25	S 7 St	Whitworth Ln S	Morris Ave S	Left	189	0	13411	14	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	146
2860	25	S 7 St	Whitworth Ln S	Morris Ave S	Left	189	0	13411	14	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	147
470	30	Edmonds Ave SE	SE 20 Pl	SE 17 St	Left	290	0	8903	9	0	15	0	0	0	0	0	0	0	0	0	0	0	10	10	10	148
1590	110	Park Ave N	NE 8 St	NE 11 Pl	Right	270	90	2124	3	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	149
430	40	Duvall Ave NE	NE 8 St	SE 118 St	Right	121	0	2124	3	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	150
1580	130	Park Ave N	N 32 St	N 32 St	Right	144	0	2124	3	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	151
1580	135	Park Ave N	N 32 St	N 32 St	Right	144	0	2124	3	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	152
1100	40	Lake Ave S	Airport Wy	S Tillicum St	Right	821	10	3517	4	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	153
1870	70	Shattuck Ave S	S Grady Wy	S Tillicum St	Right	821	10	3517	4	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	154
1670	10	S Puget Dr	S 15 St / Talbot	Mile Post - 1121.5	Left	1268	25	13679	14	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	155
1580	140	Park Ave N	N 33 Pl	N 33 Pl	Right	266	0	2124	3	0	5	0	0	0	0	0	0	0	0	0	0	0	10	10	10	156
2080	250	Union Ave NE	N 33 St	Break	Left	371	10	7251	8	0	10	0	0	0	0	0	0	0	0	0	0	0	10	10	10	157
2600	10	NE 4 St	NE 25 Pl	Mile Post - 770	Left	813	0	2637	3	0	10	0	0	0	0	0	0	0	0	0	0	0	10	10	10	158
1380	100	Monroe Ave NE	Bronson Wy NE	NE 11 St	Right	223	0	2360	3	15	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	159
2110	41	East Valley Rd	NE 24 Ct	SW 19 St	Left	1315	40	7166	8	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	160

## Appendix H - Prioritized list of top 200 street segments with missing sidewalks

Appendix H - Prioritized list on top 200 street segments with missing sidewalks																								
Sr#	Sq#	Street Name	From Description	To Description	Side	Length	% Completed	Volume	Pedestrian Safety Factor	Schools	Senior Citizen Center and Housing/Social Service Agency/Disabled	Hospitals	Parks	Arterial Streets	High Density Residential Neighborhoods	Urban Center Downtown	Commercial/Mixed Use	Commercial Neighborhood	Missing Link	Distance from Site Specific Attraction			Total Points	
																				Avoidability of Existing Street Right of Way	Relative Cost	Availability of Alternative Walkways		
3060	120	NE 12 St	Lynwood Ave NE	Monroe Ave NE	Left	236	0	6881	7	5	0	0	0	0	0	0	0	0	0	10	1	10	78	160
2110	41	East Valley Rd	NE 24 Ct	SW 19 St	Right	1315	0	7166	8	0	0	0	0	0	0	0	0	0	0	10	5	15	78	161
1120	4	Lake Washington Blvd N	Houser Wy N	N 14 St	Right	484	10	6429	7	0	0	0	0	0	0	0	0	0	0	10	1	10	78	162
2010	67	Talbot Rd S	S 36 St	S 34 St	Right	441	0	11690	12	0	0	0	0	0	0	0	0	0	0	10	1	10	78	163
1120	4	Lake Washington Blvd N	Houser Wy N	N 14 St	Left	484	0	6429	7	0	0	0	0	0	0	0	0	0	0	10	0	0	78	164
2010	70	Talbot Rd S	S 32 St	S 27 Pl	Left	1764	10	6283	7	0	0	0	0	0	0	0	0	0	0	10	0	0	78	165
2010	70	Talbot Rd S	S 33 St	S 27 Pl	Right	1764	0	6283	7	0	0	0	0	0	0	0	0	0	0	10	0	0	78	166
1355	95	Martin Luther King WY S / SR 990	S 133 St	67 Ave S	Left	2035	0	21953	22	10	0	0	0	0	0	0	0	0	0	10	0	0	78	167
1355	95	Martin Luther King WY S / SR 990	S 133 St	67 Ave S	Right	2035	0	21953	22	0	0	0	0	0	0	0	0	0	0	10	0	0	78	168
930	10	Jefferson Ave NE	NE 4 St	NE 3 St	Left	89	0	6484	7	0	5	0	0	0	0	0	0	0	0	10	0	0	77	169
2060	5	Union Ave NE	NE 1 Pl	Index Ct NE	Left	382	60	6542	7	0	0	0	0	0	0	0	0	0	0	10	0	0	77	170
2890	20	NE 8 Pl	Harrington Ave NE	Index Ct NE	Left	256	75	500	1	0	0	0	0	0	0	0	0	0	0	10	0	0	77	171
2080	25	Union Ave NE	NE 2 St	NE 3 Ct	Left	651	60	6542	7	0	0	0	0	0	0	0	0	0	0	10	0	0	77	172
610	40	Garden Ave N	N 4 St	NE 5 St	Left	680	25	1678	2	0	0	0	0	0	0	0	0	0	0	10	0	0	77	173
2760	60	NE 6 Pl	Harrington Ave NE	Index Ave NE	Right	295	50	500	1	0	0	0	0	0	0	0	0	0	0	10	0	0	77	174
3060	160	NE 12 St	Pierce Pl NE	Pierce Ave NE	Left	137	0	5208	6	0	0	0	0	0	0	0	0	0	0	10	0	0	77	175
3060	160	NE 12 St	Pierce Pl NE	Pierce Ave NE	Right	137	0	5208	6	0	0	0	0	0	0	0	0	0	0	10	0	0	77	176
3060	160	NE 12 St	Cl Admin	SE 157 St	Left	140	0	500	1	0	15	0	0	0	0	0	0	0	0	10	0	0	77	177
7560	10	118 Ave SE	Talbot Rd S	Smithers Ave S	Left	160	0	500	1	0	0	0	0	0	0	0	0	0	0	10	0	0	77	178
3410	10	S 20 Pl	Queen Ave NE	Redmond Ave NE	Left	185	0	500	1	0	0	0	0	0	0	0	0	0	0	10	0	0	77	179
2850	120	NE 7 St	Queen Ave NE	Redmond Ave NE	Right	165	0	500	1	0	0	0	0	0	0	0	0	0	0	10	0	0	77	180
3590	10	S 23 St	Shattuck Ave S	Talbot Ave S	Left	168	0	500	1	0	0	0	0	0	0	0	0	0	0	10	0	0	77	181
430	100	Duvall Ave NE	NE 24 St	SE 100 St	Right	173	0	15639	16	0	0	0	0	0	0	0	0	0	0	10	0	0	77	182
430	100	Duvall Ave NE	NE 24 St	SE 100 St	Left	173	0	15639	16	0	0	0	0	0	0	0	0	0	0	10	0	0	77	183
1900	30	Smithers Ave S	S 21 St	S 20 Pl	Left	175	0	5208	6	0	0	0	0	0	0	0	0	0	0	10	0	0	77	184
3060	150	NE 12 St	Olympia Ave NE	Pierce Pl NE	Left	176	0	5208	6	0	0	0	0	0	0	0	0	0	0	10	0	0	77	185
3060	150	NE 12 St	Olympia Ave NE	Pierce Pl NE	Right	176	0	5208	6	0	0	0	0	0	0	0	0	0	0	10	0	0	77	186
3060	170	NE 12 St	Pierce Ave NE	Queen Ave NE	Left	183	0	5208	6	0	0	0	0	0	0	0	0	0	0	10	0	0	77	187
3060	170	NE 12 St	Pierce Ave NE	Queen Ave NE	Right	183	0	5208	6	0	0	0	0	0	0	0	0	0	0	10	0	0	77	188
9865	30	SE 157 St	118 Ave SE	SE 157 Pl	Left	226	0	500	1	0	15	0	0	0	0	0	0	0	0	10	0	0	77	189
1690	101	Queen Ave NE	NE 24 St	NE 23 Ct	Left	233	0	500	1	0	0	0	0	0	0	0	0	0	0	10	0	0	77	190
945	10	Jericho Ave NE	NE 3 St	NE 4 St	Left	493	50	500	1	0	10	0	0	0	0	0	0	0	0	10	0	0	77	191
945	31	Jericho Ave NE	NE 2 Ct	NE 3 St	Left	248	0	500	1	0	0	0	0	0	0	0	0	0	0	10	0	0	77	192
2010	130	Talbot Rd S	S 21 Pl	S 20 Pl	Left	250	0	500	1	0	5	0	0	0	0	0	0	0	0	10	0	0	77	193
920	30	Index Pl NE	NE 6 Pl	NE 7 St	Right	260	0	500	1	0	5	0	0	0	0	0	0	0	0	10	0	0	77	194
3090	20	NE 13 St	Jefferson Ave NE	End E	Right	269	0	500	1	0	5	0	0	0	0	0	0	0	0	10	0	0	77	195
1740	130	Redmond Ave NE	NE 21 St	NE 22 St	Right	301	0	500	1	0	15	0	0	0	0	0	0	0	0	10	0	0	77	196
3160	40	SE 16 Pl	Index Ave SE / Monroe Ct SE	Newport Ct SE	Right	310	0	500	1	0	0	0	0	0	0	0	0	0	0	10	0	0	77	197
2170	10	SW Victoria St	Hardie Ave SW	Rainier Ave S / SR 167	Right	312	0	500	1	0	5	0	0	0	0	0	0	0	0	10	0	0	77	198
4800	235	80 Ave S	S 135 St	Naches Ave SW	Left	324	0	500	1	0	10	0	0	0	0	0	0	0	0	10	0	0	77	199
3600	30	N 12 St	Park Ave N	Meadow Ave N	Right	669	50	500	1	0	5	0	0	0	0	0	0	0	0	10	0	0	77	200